

The background of the cover is a deep space scene. It features vibrant blue and purple nebulae and star clusters. A large, dark, circular sphere, possibly representing a planet or a black hole, is positioned in the lower center, partially obscured by the title text. The overall lighting is ethereal, with bright points of light from stars and nebulae illuminating the scene.

IN THE BEGINNING

Science and

Scripture Confirm Creation

BRYAN W. BALL, Editor

IN THE BEGINNING

SCIENCE AND SCRIPTURE CONFIRM CREATION

A biblical view of the earth and human beginnings

In an age when science and the scientific method dominate public opinion, those in the minority with a different worldview are often treated with contempt.

Sometimes it seems that evolutionists surround us. Every science article, each museum display, even pop culture, casually references imaginary creatures crawling out of the ooze hundreds of millions of years ago. Some Christians are actually starting to abandon literal readings of Genesis for theories that they perceive are more easily synthesized with the claims of science.

How we understand our origins affects virtually everything else we believe as Adventist Christians.

Adventism is foundationally based on Scripture. Today, people are questioning the Genesis account. What will they question next? If the Bible doesn't have the final word on truth, what does?

Fortunately, there is great news. It is entirely possible to defend the traditional Adventist positions on Scripture, Creation and the Flood and not be scientifically illiterate. In fact, there are many questions that defy answers on the basis of science alone.

Do you really want to know where we came from? This book, written by a team of well-qualified Adventist Bible scholars and scientists from three continents, provides an intelligent, reasoned basis for a continuing belief in the Bible and the biblical teaching of the creatorship of God.



BRYAN W. BALL was born in Devon, England. He received his MA in Religion from Andrews University and his PhD from the University of London. His many years of service include church pastor, evangelist, conference president (North England Conference), principal of Avondale College in Australia and president of the South Pacific Division. He is married to Dawn and they have three children.

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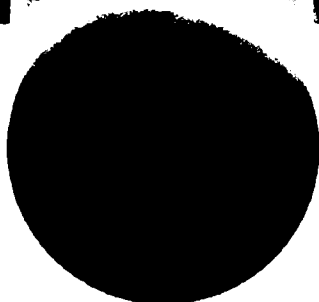


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**EDITED BY
BRYAN W. BALL**

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BARRY D. OLIVER and PAUL B. PETERSEN**



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Foreword

From its beginning the Seventh-day Adventist Church has been strongly committed to the biblical doctrine of Creation. The church has taught that in one week the world was created by God and that this week occurred a relatively short time ago – less than ten thousand years. It has not accepted the contention that the created order is many millions of years old and that the world as we now know it came into being as a result of processes of geological change and natural selection over an immense period of time.

Between 2000 and 2005 the church conducted an extensive series of conferences on science and religion. Conferences were held in many of the divisions of the world church and by the General Conference itself. One significant outcome of these conferences was a consensus statement, which reaffirmed the traditional understanding of the church on the subject of Creation. Another significant outcome was evidence of considerable struggle on the part of some to continue to affirm that traditional position.

This collection of essays has been written with the underlying assumption that it is very important for the church to speak with one voice on the question of origins. In the midst of a cacophony of voices that offer numerous alternatives, the Seventh-day Adventist Church understands the Bible to teach that those who have a special role to play in the proclamation of the gospel in the time just before the return of Jesus Christ will remain committed to the creatorship of God. They are called and are to call others to “worship Him who made heaven and earth, the sea and springs of water” (Rev 14:7, NKJV). They see in this message of the first angel of Revelation 14 an overt reference to the fourth commandment of Exodus 20 – the commandment that calls upon all human beings to remember the creatorship of God by honoring him through faithful observance of the Sabbath. The clear implications of God calling for a people who will boldly proclaim his creatorship is that the people to whom the message is proclaimed have abandoned this belief and that those who proclaim it have not!

There are no simplistic explanations or rationalizations here. The authors of this book are well aware that in an age when science and the scientific method dominate public opinion, those in the minority with a different worldview are often treated with contempt. They are also aware of many difficult questions asked of those who wish to believe the biblical account of Creation, and the perceived conflict between the conclusions of science and the teachings of the Bible. They would probably even admit that they do not have answers to some of the questions asked by science and some scientists. However, this book ably demonstrates that it is still entirely possible to defend the traditional Adventist positions on Scripture, Creation and the Flood and not be a scientific or a theological illiterate. It demonstrates that there are questions to be asked of science which defy answers on the basis of science alone.

Unfortunately, among many who used to be called “evangelical,” recent years have increasingly seen shifting attitudes to the Bible and its teaching on Creation. Bowing to what they perceive to be

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the weight of scientific evidence, they have abandoned a more literal reading of Genesis for one that they see as synthesizing the claims of science with the claims of the Bible. In so doing, they fail to do justice to either – especially Scripture. What has resulted is an ever-increasing pressure on the dwindling minority who still stand in the tradition of the evangelical understanding of revelation, inspiration and the authority of Scripture. There is a trend to accept theistic evolution by many within this group, especially those from churches which were once known as “evangelical,” but who have capitulated to a new attitude to the Bible and the pressures of evolution. Included among this group are some Seventh-day Adventists and former Seventh-day Adventists, some of whom have the capacity to exercise significant influence over others.

In the light of such developments this book has been written to provide a sound biblical, intelligent, reasoned basis for continuing belief in the Bible and the biblical teaching of the creatorship of God. It devotes a number of essays to the Bible itself – how we received it, how we read it and how we regard its authority. It openly espouses a reading of Genesis that accepts a short chronology. Does it present answers to every question? It does not. Some matters are just not as cut and dried as we would like them to be – either from biblical or scientific standpoints. There are some aspects of this topic on which we will need to reserve judgment until we have more evidence or better understanding. Perhaps there are some things we will only understand when the great cosmic controversy is ended. Whatever the case, this series of essays has been compiled in order to provide a reasoned, substantial basis for acceptance of the biblical account of Creation and to affirm the faith of those who choose to believe.

I commend this work to you and to the whole church as a valuable contribution to the ongoing discussion on origins. It does not pretend to have the last word. That prerogative is God’s alone. It provides foundations upon which the structure of belief can be built and adds new perspectives to foundations already laid. Its credibility is in no small way established through the reputations of the contributors, all of whom hold earned doctoral degrees and currently hold or have held major positions in universities and colleges of advanced education around the world. Several are experienced authors with many books and articles in scholarly journals to their credit. Their integrity, as well as their scholarship, makes this book an important contribution to the creation/evolution debate and to the defense of the biblical view of origins.

Barry Oliver
President
South Pacific Division

Introduction

Is another book on origins really necessary?

It would be easy to suggest a negative reply to the question. The constant stream of origins-focused books and well-informed articles at every level is surely enough to answer most questions the average reader might have concerning the beginnings of the cosmos, the world and human life itself.

Certainly this appears true of our own community of faith. Among the more recent works from Adventist authors that could be mentioned – all in a long line of scholarly, informed and readable studies stretching back many decades – are Ariel A. Roth, *Linking Science and Scripture* (1998), John Ashton, *In Six Days* (1999), John Baldwin (ed.), *Creation, Catastrophe and Calvary* (2000), Leonard Brand, *Beginnings* (2006), Colin Mitchell, *Origins: Accident or Design?* (2009) and L. James Gibson and Humberto Rasi (eds.), *Understanding Creation* (2011). These works, and many others from Adventist publishing houses around the world, argue the case for a biblically based understanding of earth and human history in keeping with basic Adventist belief. They contain a wealth of important information from different perspectives on many aspects of creation and the relevant science, and all repay careful reading.¹

However, for a number of reasons a positive answer to the question can also be argued, and those reasons provide the basis for this book. They include:

- The desirability of new perspectives and fresh voices that will strengthen confidence in the biblical account of origins.
- The creation/evolution debate continues to raise new questions, both within the scientific community and among believers who recognize the significance of origins for the church and the wider world.
- Conflicting views on what appear to be basic issues, not only between evolutionary and Christian scientists, but also between Christian writers on origins issues. This is certainly true of the wider Christian scene, whose literature often impinges on the thinking of some within the Adventist community.
- The discovery of new data and new interpretations of old data constantly appear in the scientific literature and call for careful examination and comment from an Adventist Christian viewpoint.
- New challenges within the church, which seemingly often arise from a lack of understanding the material already available or, of even greater concern, from presuppositions apparently shaped by the prevailing secular scientific paradigm that *a priori* exclude the existence of the supernatural and any possibility of divine activity or revelation.

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The foregoing are reason enough for the continuing discussion of origins, related as it should be to the particular needs of the times and communicated in a way that can be readily understood by all interested members of the body of Christ.

This book comes from such a context. It has been written by well-trained and informed Adventist theologians, biblical scholars and scientists from three continents, many with wide administrative experience in the church as well as academic training in various disciplines. It is intended to clarify and affirm the biblical view of earth and human beginnings. It recognizes that how we understand origins affects virtually everything else we believe as Adventist Christians. It is aimed at the average reader and is not intended to be a dialogue between academics, although we may not have entirely succeeded in achieving that particular goal!

Most of the publications mentioned above are heavily weighted towards science and the evidence from the natural world that supports a Creation and Flood model of earth origins. This is entirely understandable and necessary, for that is where the battle with secular evolution is being fought and where many of our younger people, and some older ones as well, need help. The selective use of scientific data is one of the important arguments to be brought against the advocates of evolution, so the case for evolution justifiably needs challenging on its own terms – the use and interpretation of the data. This emphasis does, however, give the impression that science and scientific opinion are the primary authority on origins, which, of course, is the prevailing worldview.

Readers of this book will notice a different emphasis: there are several more chapters from a biblical and theological standpoint than there are of a scientific nature. This imbalance is intentional and reflects an important truth concerning the theme of this book and the Christian understanding of origins. It is the conviction that the truth about origins is not derived solely, or even primarily, from science and the natural world. For Christians, particularly for Adventists, the truth about origins comes initially from divine revelation, from Scripture.

This does not mean that Scripture is always easy to understand, or that, in fact, we do understand it completely or even sufficiently. Those who have wrestled, sometimes for years, with the original languages, the themes and constructions of various books of the Bible and with early earth history know that well enough. But it does mean that the biblical text has primacy, that divine revelation as the principal source of truth takes precedence over mere human considerations and over interpretation of the data that is found in nature. That is why we regard nature as God's second book and not his principal mode of revelation. All the scientists who have contributed to this volume concur with that view.

On the other hand, neither does it mean that science is to be undervalued. Science has made an enormous contribution to the betterment of society and to the advancement of human understanding in many areas and, as some of the chapters in this book will demonstrate, to the better understanding of origins. All the contributors to this book respect science and scientists, especially Adventist scientists who in the main are just as well qualified as their secular counterparts and many of whom work at the cutting edge of discovery and data interpretation in many scientific disciplines. They know better than most the strengths and weaknesses of the contemporary scientific endeavor.

So while this book argues strongly for the primacy of divine revelation, it is also based on the premise that theology and science, correctly understood, complement each other. The Bible and nature both contain truths concerning origins. Theologians and scientists therefore need to talk to

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each other and listen to each other in the same way that theologians and biblical scholars need to listen to each other and in the same way that Old Testament and New Testament scholars need to listen to each other. And scientists within the Christian tradition need to listen to theologians and biblical scholars as much as do secular scientists. For the sake of the church at large we need to emerge from our own specialist refuges and dialogue. Only so can we collectively and responsibly define and defend the truth about origins.

There are two important corollaries to the foregoing. First, when we speak of science we refer to science correctly understood and correctly undertaken – to authentic science as opposed to science that has arrogated to itself an aura and an authority beyond credibility and beyond demonstrability. This may seem obvious, but in fact it is not, since much contemporary science has lost its moorings and is afloat on a sea of unproven and unsubstantiated speculation. The frequently referred-to “scientific method” is, or should be, a process that investigates facts and phenomena with the objective of acquiring new knowledge or correcting knowledge previously obtained. It is, or should be, based on empirical and measurable data. Scientific theory is quite legitimate, even necessary, in this process provided that ultimately it can be tested by verifiable experimentation and valid data and be discarded when the evidence, or lack of it, so requires.

Unfortunately, much contemporary science does not match these criteria. In some disciplines science has become highly speculative as well as selective in its use of the available data. Some of the chapters in this book clearly demonstrate the truth of these assertions. Of even greater concern is the willingness of some scientists to actually distort the data in order to substantiate a preconceived theory. A notable example of this disturbing fact has been brought to public attention by the acclaimed TV documentary series *All Watched Over by Machines of Loving Grace*,² recently screened in the United Kingdom and elsewhere, including Australia.

The series examines the idea that since the mid-twentieth century human thinking has been shaped by the computer culture and the dream that computers and the perceived model of stability in the natural world hold the key to a better and more stable world. In this context the series explores the hypothesis that the natural world is a self-regulating system widely believed to be in a state of dynamic equilibrium. This theory, developed in the 1960s, had an enormous impact on the development of ecological theory and policy, as it still does. Discussing the “use and abuse” of these concepts, the series challenges the theory, candidly pointing out that its originators deliberately distorted the data to make it fit the theory, and then introduced it to a world searching for answers to the daunting problems of ecology, economics and failed political solutions already evident in the mid-twentieth century. Later research, however, proved conclusively that the earth is not a static self-regulating ecosystem, but is in a state of constant flux. Referring to the “chaotic instability of nature” the films argue convincingly that the ecological theory of dynamic equilibrium “is an illusion” based originally on deliberately distorted data.³ One source refers to the idea of a “self-regulating eco-system” as “a fantasy based on cybernetic ideas that were projected on to nature in the 1950s by ambitious scientists.”⁴

There is clearly more here than a discussion of early ecological theory. This alarming revelation raises fundamental questions about the assumed objectivity of contemporary scientific inquiry that will not be welcomed by those scientists willing to distort the evidence in support of a cherished theory. It should be equally unwelcome to those – and there are many – who are just as willing to

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ignore evidence that contradicts their particular view. It also demonstrates the passive compliance of a public conditioned to accept without question the confident pronouncements of the scientific community, whether proven or not. The far-reaching influence of theories so generated is remarkable and is deep cause for concern. That there are obvious parallels in much of this to the development and promulgation of evolutionary theory is quite obvious and cannot be left unchallenged.

Also of concern is the fact that the established and widely respected scientific method, which resulted from the eighteenth-century Enlightenment, is based on the idea that there is ultimately no purpose in life, human existence and therefore in the world itself, and on rejection of the Bible and biblical authority. It cannot be doubted that this is now the prevailing attitude in Western culture and in many parts of the world influenced by Darwinian and neo-Darwinian thinking. The astute and articulate Lesslie Newbigin recognized this. Arguing that any effective communication of the gospel in our culture must recognize where that culture stands, he says:

For there can be no question that for the ordinary educated person in our society, the real world is not the world of the Bible but a world that can be explained, and is being more and more fully explained, without reference to the hypothesis of God.⁵

We should recognize the significance of that observation for our own particular world mission, in any area of the world where the contemporary scientific method prevails.

There is a second corollary to the need for dialogue between scientists and theologians. It is that the theology should be biblical theology, and not theology of some other kind, infected by philosophy, secularism, humanism or prevailing cultural norms. True theology, especially for Adventists, is biblical theology. It recognizes the fact of divine revelation and the consequent authority of Scripture and draws its understandings of God, humanity and the world principally from that source. Newbigin, again, reminds us of the deleterious effect of Enlightenment thinking on the modern scientific worldview and consequently on the status of the Bible:

Under this light, the Bible can have no privileged status. It is part of the whole corpus of ancient literature. The events it records are to be understood by placing them within the unbroken network of cause and effect that links all history together. The ideas it expresses, whether in myth, saga, or legend, are to be understood by relating them to the similar beliefs of other ancient peoples. And the religious experience to which it bears witness is to be understood as part of the religious experience of the human race as a whole.⁶

The “sacred book,” he says, “has been desacralized.” That can never be the basis of an Adventist understanding of the Bible and it is of great concern that theology shaped by such humanistic, Enlightenment principles rather than by biblical theology seems to be preferred by some, with potentially far-reaching and devastating consequences for the future of the church.

So the dialogue between theologians and scientists in the church that needs to take place or to continue can only be profitable on the basis of these two important corollaries: that the science and the scientific method are authentic and not derived from secular humanism and that the theology is genuinely biblical theology derived from Scripture. That said, we all need to see as much as possible of the whole picture, vast and complex as it is, and not be satisfied to remain in our own particular

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small corner. If God still wants to speak to us from both Scripture and nature we must listen to what he says and to each other for the benefit of the whole church and every believer, to say nothing about our collective responsibility to tell the story to a confused world.

In addition to providing biblical, theological and scientific arguments and data in support of the biblical teaching of Creation, this book also seeks to address the growing challenge of theistic evolution – the view that God used the evolutionary process to create the world and to bring all life into existence. Apart from the fact that the concepts of creation and evolution are inherently and etymologically contradictory, there is no biblical evidence whatever that supports evolution in any form. These facts alone should be sufficient to halt theistic evolution in its tracks. Evolution is still evolution in whatever guise it comes, another fact that cannot be avoided.

In recent times theistic evolution has replaced the biblical view of Creation in many evangelical churches that once professed allegiance to a thoroughly biblical theology of origins. The evidence is available from a number of sources. If only thirty years ago anyone had predicted that this would happen, he or she would have been regarded with incredulity. David Wells, distinguished professor of historical and systematic theology at Gordon-Conwell Theological seminary and a lifelong evangelical himself, says in his powerful and articulate analysis of the evangelical scene, *No Place for Truth*. “I have watched with growing disbelief as the evangelical Church has cheerfully plunged into astounding theological illiteracy.”⁷ Theological illiteracy leads to theological confusion and to theological accommodation. Theistic evolution is, in the mind of this writer at least, a classic example of that confusion and accommodation. There is, however, evidence that theistic evolution is already claiming the attention of some within our own ranks, as hard to believe as that may be.

It will not be out of place, therefore, to remind ourselves of the basic presuppositions of contemporary science that undergirds evolutionary theory. The evidence again is abundant, but since it is explored in more detail in at least two chapters that follow it will be sufficient to refer to only one or two of many sources that could be cited. Phillip Johnson, a Harvard graduate and professor emeritus of law at the University of California at Berkeley when he wrote the following, identified the fundamental problem with evolutionary theory as its prior commitment to atheism. “Modern science protects its grand theory of evolution by starting with the basic assumption that God is out of the picture and by sticking to that assumption through every discouragement.”⁸

Richard Lewontin, a high-profile evolutionary scientist offers an extraordinarily candid assessment of the reality in coming to the same conclusion:

We take the side of science in spite of the patent absurdity of some of its constructs, in spite of its failure to fulfill many of its extravagant promises of health and life, in spite of the tolerance of the scientific community for unsubstantiated just-so stories, *because we have a prior commitment, a commitment to materialism*. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how mystifying to the uninitiated. Moreover, *that materialism is an absolute, for we cannot allow a Divine Foot in the door.*⁹

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The molecular biologist Michael Denton concurs with this assessment but goes even further when he argues at the conclusion of his incisive and persuasive book, *Evolution: A Theory in Crisis*, that Darwinism continues to be promulgated in the face of “hostile evidence.” “The priority of the paradigm,” he says, “takes precedence over common sense.”¹⁰

The articulate and well-argued works of Phillip Johnson and Michael Denton and others of a similar nature, to say nothing of the works by Adventist authors cited earlier, lay bare the weaknesses, inconsistencies and omissions of evolutionary theory in a way that demands honest and objective consideration. That intelligent, supposedly well-informed Christians can subscribe, quite willingly it would seem, to any form of evolution in the face of such persuasive evidence is a great mystery. Surely prior commitment to a materialistic paradigm cannot be the reason? Yet it cannot be eliminated entirely, for it is part of the fundamental problem. What is beyond question is that if theistic evolution gathers momentum within the church, the consequences for Adventist theology, to say nothing of the historic Christian teaching on which it is built, will be dire indeed. This book was conceived and has been written in the hope that it will help to prevent such a catastrophe.

Within this overall context, the chapters and topics in this book proceed in the following order:

Chapter 1 lays a foundation for succeeding chapters by reviewing the basic question of divine revelation and consequent biblical authority. It argues that since Scripture is ultimately of divine origin, the outcome of a revelatory process initiated by God, its authority takes precedence over all other sources of information concerning origins, as it does in all other aspects of Christian belief. Authentic Christianity is judged by its allegiance to revelation and imposes on its followers the obligation to take Scripture seriously, even if it is not always fully understood or requires faith in some of its assertions.

In chapter 2 Robert K. McIver provides the first of several studies on Genesis, self-evidently a crucial book for understanding origins. Here he discusses the key issues of the transmission and credibility of the Genesis text. He points out that, like the entire Hebrew Bible, the textual history of Genesis is “one of remarkable survival” and that in spite of many challenges and difficulties through the millennia the Genesis text as we have it today is “essentially what was originally written” and therefore a credible basis for understanding the Creation account.

Chapter 3 deals with the important question of what the Bible as divine revelation claims for itself. Christianity has derived from Scripture a theology of God, of Christ, of sin and salvation, and Adventism has drawn from its pages theologies of the Sabbath, the sanctuary and last events, among other doctrines. But is there a theology of Scripture? What does the Bible say about itself? Jo Ann Davidson explores these questions from the biblical text, justifying the confidence we have in it as the source and foundation of our beliefs and our worldview.

In chapter 4, and in the context of the preceding chapters, H. Ross Cole establishes the fundamental importance of the book of Genesis, pointing out that it is much more than a record of primeval and patriarchal history. By examining the various themes in the book, particularly in the early chapters, he clearly demonstrates that Genesis is a critical introduction to the entire Bible and to biblical theology as a whole. Major strands of Adventist theology thus originate in the Genesis text and only reach fulfillment in later centuries and later books of the Bible.

Laurence A. Turner, another Old Testament scholar, continues the emphasis on Genesis in chapter 5 with a careful analysis of Genesis 1 and 2 in which he argues convincingly that these two

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chapters contain much more than the record of Creation. Genesis 1 and 2 are rich in theology as well as history, and were so intended from the beginning; facts that are sometimes lost in the continuing debate over origins that often focuses on history and chronology. Readers may be particularly interested in the sanctuary symbolism already found in these two chapters.

Chapter 6 considers another important matter concerning Genesis – the question of its origin. How did it come into existence? It is suggested here that perhaps we should reconsider the so-called tablet theory proposed some years ago, and endorsed by prominent Genesis scholars and archaeologists at the time. If Genesis was originally written sequentially on a series of tablets in ancient times and in accordance with the customs of the time as the text itself indicates, and later compiled by Moses, it would significantly strengthen confidence in the historicity of the Genesis record.

In chapter 7 Richard M. Davidson discusses the crucial issue of time in relation to Creation as indicated in Genesis 1 and 2, particularly in chapter 1:1-3. This is careful textual analysis at its best and establishes from the opening words of Scripture a convincing basis for the relatively recent origin of life on earth while leaving open the question of the age of universe as a whole, including that of planet Earth. Dr. Davidson's fair and balanced analysis of the so-called gap theory in Genesis 1:1 is of particular interest.

In chapter 8 Paul B. Petersen reminds us that it is not only in Genesis that we read of Creation. The Bible throughout speaks repeatedly of God and his creation and any objective evaluation of the biblical teaching of Creation must take into account the entire biblical testimony, not only the opening chapters of Genesis. It is an important argument, for as this author points out many aspects of biblical theology are rooted, not only in the book of Genesis, but more specifically in its teaching about Creation.

Steven Thompson takes up another vital aspect of the biblical witness in chapter 9 when he discusses the New Testament use of the Genesis text. He does this in the context of pagan views of origins that circulated widely in the first-century world at the time the New Testament was being written. Emphasizing that Creation was a core New Testament belief, this is an interesting approach to the fact that creation was also an important element in the proclamation of the early church to a pagan society. There are relevant lessons for today to be gleaned here, as the author points out.

William G. Johnsson, former editor of the *Adventist Review*, examines an equally critical dimension of the biblical witness in chapter 10 when he examines the New Testament emphasis on the Christocentric nature of Creation, arguing that it is more fundamental to a thoroughly Christian understanding of origins than even the Genesis text itself. The chapter develops the thesis that the proper study of Creation begins with the Creator, Jesus Christ, according to the testimony of the New Testament writers. It is a persuasive argument, and provides at least seven major theological problems for advocates of theistic evolution and progressive creation.

Chapter 11 brings us to the first of the essays written from a scientific perspective. In this chapter Timothy G. Standish presents the evidence for intelligent design from molecular biology. While pointing out that intelligent design is not precisely the same as biblical creationism, Dr. Standish contends that irreducible complexity and specified complexity are "compelling arguments" in the debate with contemporary neo-Darwinism. Here is some of the evidence often overlooked or ignored by evolutionary advocates.

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In chapter 12 Grenville J. R. Kent combines his understanding of the Old Testament with persuasive data from cosmology to argue that the cosmos itself provides irrefutable evidence of design and purpose. Within this biblical context such evidence also strongly supports the view that planet Earth, the “privileged planet,” is the outcome of intention rather than mere chance. Cosmology thus combines with molecular biology to argue in favor of purpose and design, both of which presuppose an intelligent mind.

Evolutionary literature and most evolutionists speak as though the case for evolution was proved and watertight. In chapter 13 Professor John C. Walton reminds us that this is not the case. With careful attention to detail he exposes several of the weaknesses and gaps in evolutionary theory, concluding that neo-Darwinism needs to be “drastically scaled down” since its pretensions “have not stood up” to critical examination. “Evolution in any guise,” he says, is a “limited theory” that “cannot explain the origin of life or the origin of species.”

Another aspect of the evolutionary manifesto that deserves much wider recognition is the fact that many scientists, including many who are not Christian, are critical of evolutionary theory. There are several reasons for their doubt and in chapter 14 L. James Gibson examines five major areas in which these scientists have questions, surveying some of the relevant literature and providing many candid quotations from well-qualified scientists who are not persuaded that the evidence always supports the claims of evolution’s most strident advocates.

Chapter 15 focuses on geology. The Genesis record of early earth history is widely disbelieved on account of the Flood as well as the Creation record. Ariel A. Roth, the church’s leading authority on Flood geology and paleontology, discusses several geological and geophysical phenomena in addition to fossil evidence, which can only be satisfactorily explained by a worldwide flood of Genesis proportions. The geologically validated biblical flood account substantially increases confidence in the credibility of Genesis as a whole.

In chapter 16 Reinder Bruinsma turns from theory and belief to practice, examining some of the undesirable consequences of evolutionary thinking in society, and arguing that the implications of belief in natural selection and the survival of the fittest will inevitably be seen in human attitudes and actions, which in the recent past have already included eugenics and Nazi theories of race betterment. He warns that “the dangers of immoral and destructive” behavior arising from Darwinian theory are likely to increase in the secularized Western world.

In the context of the preceding chapters Lael Caesar asks a crucial question in chapter 17: Is theistic evolution a valid option for Christians who claim to accept the Bible as the authoritative word of God? Discussing several major doctrines shared by historic Christianity and mainstream Adventism he demonstrates that theistic evolution undermines each one, effectively destroying what for centuries has been regarded as authentic Christianity and at the same time posing a considerable threat to historic Adventism. Dr. Caesar ends the chapter and the book by pointing out that theistic evolution “leads to the abandonment of central biblical teachings.” It is, he says, “perhaps the most serious theological challenge of our time.”

Readers will note that several themes and topics relevant to the creation/evolution discussion are referred to by more than one writer. Divine revelation, the authority of Scripture, the theology of Genesis, theistic evolution and the New Testament witness to creation, for example, are all discussed in more than one chapter. In the chapters dealing with scientific issues, intelligent design, the Genesis

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Flood and the flaws and omissions of evolutionary theory are mentioned by more than one writer. We do not regard such discussion as unnecessary overlapping but rather as complementary, for different authors present various aspects of a theme from their own perspectives and in the context of their own particular topic. The significance of these themes to the affirmation of the biblical creation account and to the critique of the evolutionary paradigm is thereby greatly strengthened.

While all the foregoing and what follows might seem to be a comprehensive defense of the biblical creation account, in reality it is not so. The vastness and complexity of the subject, both from biblical and scientific perspectives, requires that at best it can only be regarded as a modest attempt to bring further understanding to one of the fundamental beliefs of Adventist Christian theology. We offer this collection of essays from this standpoint – as complementary to the many excellent studies already available and certainly not as the last word on a topic that has engaged the church for centuries but which has also become in recent times the focus of world attention. We offer it in the hope that it will bring some affirmation and some clarification and some certainty to believers everywhere and much thanks and praise to the Creator himself.

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August 2011

NOTES AND REFERENCES

1. The recent study by David C. Read, *Dinosaurs: An Adventist View*, came to our attention too late to be referenced in this book. It deals with many more aspects of the creation/evolution debate than the title suggests, and is recommended reading for all who are interested in the discussion of origins.
2. The title is taken from a poem by 1960s poet Richard Brautigan.
3. Particularly episode 2, "The Use and Abuse of Vegetational Concepts." Quotations are from the script of this episode.
4. See www.sbs.com.au/documentary
/program/allwatchedoverbymachinesoflovinggrace.
5. Lesslie Newbigin, *Foolishness to the Greeks: The Gospel and Western Culture* (Grand Rapids, MI and Cambridge, UK: William B. Eerdmans, 1986), 67.
6. *Ibid.*, 42.
7. David F. Wells, *No Place for Truth, or Whatever Happened to Evangelical Theology?* (Grand Rapids, MI and Cambridge, UK: William B. Eerdmans, 1993), 4.
8. Phillip Johnson, *Defeating Darwinism by Opening Minds* (Downers Grove, IL: InterVarsity Press, 1997), 88.
9. Richard Lewontin, "Billions and Billions of Demons," *The New York Review*, January 9, 1997, 31, emphasis supplied.
10. Michael Denton, *Evolution: A Theory in Crisis* (Bethesda, MD: Adler & Adler, 1986), 352.

Chapter 1

REVELATION AND THE AUTHORITY OF SCRIPTURE

Bryan W. Ball

Revelation may be defined as the self-disclosure of God to humankind. Any knowledge that human beings may have of God, therefore, is not the result of their own diligent inquiry but is the outcome of God's gracious initiative and his will to be known. Without this revelation, God would remain hidden and incomprehensible. G. S. Hendry says, "Knowledge of God must be given by God himself."¹ That which is thus revealed is the foundation of all Christian understanding of this world and the world to come. The significance of such revelation to Christianity and to Christian belief and witness can hardly be overstated. Paul Helm correctly observes, "Revelation is central to Christianity, and it is hard to see how Christianity could proceed without appealing to it."²

Adventist theologians have generally agreed with this historic view of revelation. They also accept the proposition that revelation is "the ultimate question" underlying many contemporary issues in society and in the church.³ One suggests that revelation is the "crucial question" for theology today, making the important point that the Bible's primary claim is not simply to inspiration, but to revelation.⁴ More recently Raoul Dederen has related the issue to the whole church stating, "Few issues are of more crucial significance for Christians than the nature and purpose of God's self-revelation."⁵ In his recent study of revelation and inspiration Fernando Canale even argues the importance of the topic because "Christian theology is in crisis."⁶

This high view of revelation underlies the defining claim of Christianity to be a revealed religion. That the Judeo-Christian God is a God who actively seeks mankind is Christianity's distinguishing characteristic. This seeking God is known through his self-revelation, principally in Christ, but also in Scripture. This historic understanding of God and revelation has in recent years come under attack, and we do well to heed Leon Morris's warning, "We can no longer take the traditional idea of revelation for granted."⁷ That the issue has already impinged on Adventist thinking is evidenced in the Adventist Theological Society publication *Issues in Revelation and Inspiration* (1992), a response to Dr. Alden Thompson's book *Inspiration: Hard Questions, Honest Answers* (1991). The debate continues to simmer and is not likely to go away. The evangelical theologian J. I. Packer once said of revelation, "The real subject under discussion is the essential nature of Christianity."⁸ The significance of that remark should not escape us at this critical time.

These matters give rise to a series of related questions: What is revelation? Can it be understood? Has it occurred? Does the Bible itself have anything to say on the matter? Is the Bible the result of divine revelation? If it is, then what is an appropriate response? Not least are the questions relating to revelation and reason, whether or not revelation occurs in propositional form, and if God's

self-revelation is just that – a disclosure of himself and not also of information about him. Within the confines of this chapter we will attempt to answer some of the questions in the hope that we can determine whether or not Scripture should continue to have authority in the life of the church, in the formulation of belief and in the lives of individual believers, as it has done for the best part of two millennia.⁹

Revelation Historically Understood

It will be helpful to begin with a brief survey of revelation as understood historically.

The Early Church. It is clear from the New Testament that the first Christians accepted totally that God had revealed himself in Christ and also through Scripture. Scripture for them was the corpus of Old Testament writings, which Christ himself had frequently cited and to which he had appealed to authenticate his own identity and mission (Luke 24:25-27, 44-47). That God had come to earth in Christ and that he was the fulfillment of Messianic prophecy was undoubtedly the keynote of apostolic proclamation as is apparent from even the most cursory reading of Acts. But the emphasis on Scripture as witness to the facts concerning Christ and as being revelatory and with redemptive purpose itself is equally clear (e.g., Acts 13:32-34; 17:1-3; 18:28).

When Paul wrote to Timothy, c. AD 64, concerning “Scripture,” noting that Timothy had known from childhood “the sacred writings”¹⁰ and claiming “All Scripture is breathed out by God” (2 Tim 3:16),¹¹ he wrote initially to Timothy himself without thought of those in centuries to come. Similarly, when Peter, c. AD 67/68, declared that in “Scripture . . . men spoke from God” (2 Pet 1:20-21) he was addressing first-century Christians. Peter’s recognition of Paul’s epistles as “Scripture” (2 Pet 3:16) endorses both Paul’s writings and the status of Scripture itself. Paul’s final evangelistic endeavors in Rome, focused on Jesus and “the kingdom of God,” based on frequent appeal to “the Law of Moses and the Prophets” and his citation from Isaiah (Acts 28:23-28), is incontrovertible evidence of his respect for God’s Word as a revelation of the divine purpose. Christianity spread rapidly across the first-century Roman world primarily as a result of the proclamation of both Christ and of Scripture’s witness to Christ. It cannot be doubted that early Christians maintained a high view of Scripture for several centuries.

The Medieval Church. That major changes in Christian thinking occurred from at least the third century onward is widely recognized. Many of these changes related to beliefs about Christ, the virgin Mary, apostolic authority and therefore about Scripture itself. As the medieval period developed, the view came to prevail that Scripture of itself was insufficient, especially for ordinary people, and that it needed to be interpreted and authenticated by the church. Tradition came to assume an ever-increasing role in the life and teachings of the church.

Tradition includes customs and practices that arose in various places and that were later accepted as norms of Christian belief and practice, often formally endorsed by the church. During the medieval period the chief source of tradition became conciliar pronouncements and church decretals – *ecclesia docens*, church teaching – that assumed the same, or even a superior, authority to that of Scripture. In the view of the medieval church itself “unwritten traditions formed a second, independent, original, authentic source of information and doctrine alongside Scripture,” a position that was always unacceptable to historic orthodoxy.¹² The original revelation in Scripture had become insufficient, obfuscated and devalued.

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The Reformation. The sixteenth-century European Reformation was essentially a reaction against tradition and the subsequent errors and abuses that crept into the church as the medieval era unfolded. The defining call of the Reformation became *sola Scriptura*, the Bible only, reaffirming the foundation of authentic Christian belief. Diarmaid MacCulloch says of that era, “Authority was to be respected. . . . This was particularly the case with the greatest authoritative text of all, the Christian Bible.”¹³ One of the enduring achievements of the Reformation was the translation and printing of the Bible in the vernacular languages of Europe. Luther’s German Bible and Tyndale’s English New Testament shaped the language and cultures of their peoples, ensuring that Reformation principles continued to prevail for centuries.

A significant outcome of the Reformation emphasis on God’s Word was recovery of the “sufficiency of Scripture” – the conviction that man’s knowledge of God and everything necessary for salvation should be derived from the Bible. Packer says that as a result of this rediscovery, “The Bible was set up, according to its own demand, as judge of those traditions which had previously been supposed to supplant it.”¹⁴ The Reformation can only be understood properly as the desire to return to apostolic Christianity with its fundamental convictions about Scripture and divine revelation. Protestantism was thus born, and from it the nonconformist churches later emerged with their uncompromising insistence on Scripture as the normative guide for all religious belief and practice.

The Enlightenment. For three hundred years or more the Reformation view of Scripture dominated Protestantism and much of the civilized world. Alister McGrath states that the Bible was “central to the life of Western European society in a way that we cannot begin to imagine today.”¹⁵ It was, in fact, the single most formative influence in the final development of Western civilization. But that was to change dramatically in the eighteenth century with the coming of the Enlightenment, or the Age of Reason, resulting in the secularization of Western European thought.¹⁶

Under the influence of the Enlightenment principles of rationalism, individualism and subjectivism, many thinkers of the time, like Voltaire and Hume, came to believe that they had been emancipated from the “tyranny” of the church and Scripture. Intellectual objections were raised against Christianity and the Bible. Louis Berkhof speaks of the “chill winds of Rationalism” that swept over Europe, under which

Man became intoxicated with a sense of his own ability and goodness, refused to listen and submit to the voice of authority that spoke to him in Scripture, and reposed complete trust in the ability of human reason to lead him.¹⁷

This humanistic attitude led to rejection of the biblical revelation as traditionally understood and reflects an unjustified confidence in the unaided human mind and its ability to discover religious truth for itself. The Bible became devalued and was to be interpreted just as any other book. Divine revelation and biblical authority were replaced by human wisdom and personal judgment. History has repeatedly demonstrated the persistent attraction of this viewpoint and its devastating consequences for the individual and for society.

The Contemporary Scene. Much could be said of the prevailing eclectic scene and current views of revelation,¹⁸ but space restricts us to only two observations.

We note firstly the continuing influence of Enlightenment thinking, especially in academic circles where it prevails across most disciplines, including theology and biblical studies in many

institutions. Here it first led to a radically critical view of the Bible, resulting in the reinterpretation of Scripture according to Enlightenment principles.¹⁹ The so-called documentary hypothesis, according to which the Pentateuch is a late compilation (c. sixth century BC) from several different sources rather than the work of one author or compiler, Moses, is a classic example. The New Testament has also been radically reinterpreted. Much of the life and teachings of Jesus have been rejected as myth, especially his miracles and the resurrection, and Jesus himself widely regarded, not as the Son of God as historically understood, but as an itinerant peasant preacher or a social revolutionary intent on undermining Roman authority in Palestine.²⁰

Second, revelation itself has been redefined. It is now widely held that revelation is not a phenomenon that occurs through words *about* God, that is, in the Bible, but that it is a disclosure of God *himself*, an encounter of the human with the divine. Martin Buber, an Austrian Jewish philosopher (1868-1965), encapsulated encounter theology with his now-famous dictum “I-Thou” that succinctly represents this point of view – revelation principally as “encounter.” It has to be said that there is an important truth here. If the purpose of revelation is redemptive, then it must ultimately lead to some kind of interaction between God and humans at a personal level. But is it only this “encounter” that is the revelation of God? Or does revelation occur at another level? Do words, spoken or written, play any part in the revelatory process of bringing about an encounter between God and human beings? The remainder of this chapter will attempt to answer this most fundamental question concerning divine revelation.

The Biblical Witness to Revelation

It has been asserted that the Bible has relatively little to say concerning revelation, that revelation is a concept imposed on Scripture, and that what it does say, particularly in the New Testament, refers mainly to the revelation of Christ at the last day.²¹ We must, therefore, allow the Bible to speak for itself to determine if such claims are sustainable.

The Old Testament. Consideration of some Old Testament texts tells us explicitly that revelation occurred at various times throughout Old Testament history and that it is a basic idea in Old Testament theology. Such texts confirm our basic understanding of what revelation is – disclosure of that which otherwise would be known only to God: “The secret things belong to the LORD our God, but the things that are revealed belong to us and to our children forever” (Deut 29:29). The experience of the prophet Samuel further affirms revelation and recognizes the fact that it occurs through the words of the Lord, and at a time of God’s choosing: “The LORD revealed himself to Samuel at Shiloh by the word of the LORD” (1 Sam 3:21). David claimed that he had been the recipient of divine revelation, “For you, O LORD of hosts, the God of Israel, have made this revelation to your servant, saying, ‘I will build you a house’ ” (2 Sam 7:27). Centuries later the Babylonian king Nebuchadnezzar acknowledged that Daniel’s God was a “revealer of secrets” (Dan 2:19, 22, 28-30, 47; cf. 10:1). The repeated emphasis on revelation throughout this entire passage is impossible to ignore. Amos 3:7 reaffirms that revelation undergirds God’s mode of communicating with the prophets, “The Lord God does nothing without revealing his secret to his servants the prophets.” On the basis of these texts alone it seems difficult to avoid the conclusion that revelation occurred throughout the Old Testament era, that it was so recognized and that it frequently involved communication by word.

Many scholars recognize that the Old Testament God is portrayed consistently as “active” and

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as “speaking” and that these two characteristics are definitive of the Judeo-Christian God. This understanding is confirmed by the text of Genesis 1 and 2, seminal chapters of the Bible by any criteria. The Creation account in Genesis 1 and 2 testifies to the “active” God of the Old Testament by the use of several verbs denoting action, including “created,” “made,” “separated,” “formed,” “blessed,” “breathed,” “planted,” “caused” and so on. Beyond the various activities ascribed to God by these verbs, they also imply intention, planning, oversight and, not least, sovereignty. This early representation of the “active God” in the opening chapters of the Bible is foundational to a correct understanding of God and is frequently reiterated throughout the Old Testament.

But God also appears in Genesis 1 as the “speaking God,” who uses words to explain himself and to bring to about his purposes. The repeated use of the phrase “God said” in the Creation account not only indicates the manner in which creation took place, thereby providing the psalmist with the basis for his assertion “By the word of the LORD the heavens were made, and by the breath of his mouth all their host. . . . For he spoke, and it came to be; he commanded, and it stood firm” (Psa 33:6, 9), but also fittingly introduces us to the God who will continue to speak throughout the Old Testament. The verbs “to say” and “to speak” appear more than any other verbs in the Old Testament text, most frequently with reference to God. They repeatedly underline the fundamental nature of the Old Testament God as a God who makes known his will and his wishes in verbal form.

It is often claimed by those who are attracted to the idea of encounter revelation that God’s principal method of revelation in Old Testament times was through various acts at specific points in history and in his encounters with specific individuals at times of crisis in their lives. “The central feature of the biblical revelation is that it was given in real history, among real men in the crises of their national and individual lives.”²² While revelation is undoubtedly communicated within the context of history, and indeed includes God’s acts in history, many would question that the historical dimension was its “central” feature.

Ned Stonehouse draws an important conclusion from the role of Moses during the Exodus and in the wilderness experience of Israel. Noting the “greatness” of Moses in biblical and Israelite history, his “distinctive place in the history of revelation” and “the historical character of the Old Testament revelation,” Stonehouse remarks:

The word of the Lord which came by Moses could be and was, because of its historical character, handed down to the people from generation to generation. It is obvious that in the transmission of this special revelation the fact of its being so largely committed to writing was highly significant. The fact of its inscription assuredly did nothing to modify its essential character as revelation.²³

The resultant writings were incorporated in the Pentateuch, and the word thus written then became God’s revelation of his past dealings with his people for succeeding generations.

Morris cites several Old Testament prophetic passages, all of which refer specifically to the word of the Lord as it came to the prophets, including “The LORD said to me” (Isa 8:1); “The word that came to Jeremiah from the LORD” (Jer 7:1); “I heard the voice of one speaking” (Ezek 1:28). Morris argues convincingly against the view that revelation does not occur through the words of the prophets, for time after time that is precisely what the prophets themselves claim:

I cannot see why men should write in this way if what they wanted to tell us was

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that they had given the matter thought and were now prepared to let us have their considered conclusions. If words mean anything they are reporting disclosures. They are saying that God spoke to them, revealed himself to them if you like.²⁴

So when we allow the Old Testament writers to speak for themselves, we find that they insist that they are communicating what God first has communicated to them. "They may not use our term but they are recording what we call revelation."²⁵

The New Testament. The New Testament Greek words that are translated "reveal" and "revelation" in English versions are the verb *apokalupto*, to unveil or uncover, and the related noun *apokalupsis*, an uncovering, or an unveiling. The "unveiled" already exists prior to any *apokalupsis* and without being unveiled would remain hidden. This, as we have seen, is precisely what the basic Christian concepts of God and revelation contain. But it is more than God himself who is unveiled through the revelatory process. Knowledge and facts relative to God's redemptive purposes are also revealed.

The verb *apokalupto* is attributed to Jesus twice in Matthew 11:25-27, once of his Father and once of himself, thereby claiming for him an equal authority to reveal what is normally hidden. Elsewhere, while the Old Testament continually uses phrases like "Thus says the Lord" (e.g., Jer 31:2, 7, 15, 23, 35, 37), the New Testament records the repeated declarations of Jesus, "I say unto you" (e.g., Matt 5:18, 22, 28; John 5:19, 24-25). Here, surely, is the reason why his words elicited such astonishment, "For his word possessed authority" (Luke 4:32). It was the authority of divine revelation, equal to the authority of the Old Testament prophets. Jesus further asserts "knowledge of the secrets of the kingdom of heaven" had been given to the disciples, indicating that revelation imparts understanding (Matt 13:11, NIV). And in response to Peter's confession of Jesus as the Christ, he said to Peter, "Flesh and blood has not revealed this to you, but my Father, who is in heaven" (Matt 16:17).

Similarly, the Pauline epistles demonstrate the crucial significance of revelation in Paul's thinking. Romans 1:16-17; 1 Corinthians 2:10; Galatians 1:12; Ephesians 1:17-18; 3:3-5; Philippians 3:15 and Colossians 1:26-27 all require careful consideration since they testify explicitly to revelation and since none of them refers to the revelation of Christ at the end of the age. Most of them relate specifically to Paul's own experience. Space restricts extended discussion of these texts, but Galatians 1:11-12 deserves mention on account of its unambiguous witness to revelation in Paul's own experience. Paul says that the gospel he preached was not man's gospel, "For I did not receive it from any man, nor was I taught it, but I received it through a revelation [*apokalupsis*] of Jesus Christ." These texts alone confirm that revelation was a defining factor in Paul's life and therefore in the development of the Christian message.

In addition to these specific references there are numerous passages in which revelation is clearly assumed or implied, both in the Pauline writings and in other New Testament passages, for example, 1 Corinthians 11:23; 15:3; 2 Corinthians 4:3-6; 1 Thessalonians 2:13-14; Acts 26:12-18; John 15:15 and so on. How, in the face of all this textual evidence, it is possible to doubt that revelation is a fact in the New Testament record, unrelated to any reference to the revelation of Christ at the *parousia*, is almost beyond comprehension.

We are confronted with a mass of evidence from both Old and New Testaments to the reality of revelation, to its immense significance in the divine purpose and to the fact that it is much more

than simply “encounter,” important though that is, but that it frequently includes words that impart knowledge and understanding and that necessarily have revelatory significance themselves. Morris summarizes the significance of the biblical witness to revelation rather neatly when, having argued at some length that revelation occurs through the words of the prophets, he says, “I do not see how it is possible for a Christian to reject the idea that God has disclosed at least something of himself and still be authentically Christian.”²⁶

General and Special Revelation

The significance of revelation as a key concept for understanding the Bible and even perhaps for the survival of Christianity in an ever-increasingly secular culture has been recognized for some time. The terms “general revelation” and “special revelation” have been used in the attempt to explain and clarify the concept of revelation and it is necessary to consider these terms and their implications more carefully.

General Revelation. General revelation is the more recent term for what in the medieval period was usually called “natural revelation.” It refers to the fact that there are evidences in nature and within human experience that testify to God’s existence and that are evident for all to see. These evidences are generally held to include the cosmos that surrounds us, certain aspects of the natural world in which we live and the innate sense of right and wrong that exists in all human beings. Kant’s memorable phrase, “the starry heavens above me and the moral law within me”²⁷ is still a useful summary of the scope of general revelation.

The Old Testament, for example in Psalm 19:1-6, and the New Testament, in Romans 1:18-20, bear witness to the fact that God has revealed something of himself in nature. Paul seems to be quite clear on this, saying that God’s power and his divinity “have been clearly perceived, ever since the creation of the world, in the things that have been made” (Rom 1:20). Such revelation, however, has generally been held to be limited, perhaps awakening the conscience, an awareness of God and a desire to know more of him, but inadequate for a full understanding of either God or humanity and hence for salvation.²⁸ Gordon Clark says, “The planets above and the plants below show some of the wisdom and power of,” but argues that the cosmos and the creation do not reveal the full wisdom and power of God and that neither omnipotence nor righteousness are necessarily conclusions to be drawn from the stars.²⁹

Special Revelation. Special revelation refers to God’s self-disclosures in Christ and in Scripture, both necessitated by humanity’s natural alienation from God, the result of innate human sinfulness with its “ignorance” and “darkened understanding” (Eph 4:18; Col 1:20). The symbiotic relationship between Christ and Scripture is so close as to be in some respects virtually inseparable. Both are expressions of the divine “Word,” the very *logos* of God,³⁰ Christ the incarnate Word and the Bible the inscripturated Word, each bearing witness to the other, Christ testifying repeatedly to the role of the Written Word³¹ and the Written Word testifying clearly and consistently to the incarnate Word.³² We are concerned here particularly with the function of Scripture, the Written Word, as God’s special revelation.

While it is undeniable that the natural human alienation from God is the fundamental reason for all revelation, it is also true that special revelation is necessary on account of human finitude as well as fallenness. Revelation akin to what we now term special revelation began in Eden before the writing of the Old Testament commenced and before human sin. Clark argues that the necessity of

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special revelation became apparent as soon as humans were created, in other words on account of their creatureliness as well as, and before, their sinfulness.

When Adam was created and placed in the Garden of Eden, he did not know what to do. Nor would a study of the Garden have led to any necessary conclusion. His duty was imposed upon him by a special divine revelation. God told him to be fruitful and multiply, to subdue nature, to make use of the animals, to eat of the fruit of the trees, with one fateful exception. Thus moral norms, commands and prohibitions were established by a special and not a general revelation. Only so could man know God's requirements, and only so could he later learn the plan of salvation.³³

There is therefore a twofold necessity for special revelation: human ignorance and human sinfulness. That this Edenic revelation to the first humans occurred through verbal communication is clear. The record says, "God said to them, 'be fruitful and multiply'" and "God commanded" (Gen 1:26; 2:16). Here is the speaking God in communication with the first man and woman.

From then on, as Old Testament history unfolded and as the Old Testament text shows, God revealed himself through a succession of remarkable acts. But it is equally clear that he also revealed himself through the written account of those mighty acts. How else could succeeding generations know about those deeds and their significance? It is so obvious from a thorough reading of the Bible, especially in the case of the Old Testament, that one wonders why it has ever been disputed. Morris criticizes the artificial distinction between the deeds of God and his words, that is, the more recent view that revelation occurred in the acts of God but not in verbal form or through the written record. His perceptive comments are worth noting:

We have no access to the deeds except through the record. If the record is unreliable then we do not know what God did and accordingly we do not know how he revealed himself. We have lost the revelation. . . . It is impossible to be rid of the words if we are to find revelation in the deeds. It is the words and the deeds together which make up the revelation.³⁴

With reference to the New Testament Stonehouse declares that by its very nature this new revelation, "no less surely than the old, was virtually crying out for inscripturation in order that the Church might be provided with assured knowledge of the fulfilment of the divine purpose of redemption."³⁵

Concerning "special" revelation Morris speaks of "the scandal of particularity that we cannot evade."³⁶ It is a protest against those who dislike the idea of special revelation or who deny it altogether. Enlightenment thinking, still very much evident today, rebels against the view that mankind needs assistance to discover truth, let alone to counter the effects of fallenness and sin and the consequent need of salvation. The "scandal of particularity" is a reflection, perhaps an extension, of Paul's "scandal of the cross" – "we preach Christ crucified, to the Jews a stumbling-block [Greek *skandalon*, an offense] and to the Greeks foolishness" (1 Cor 1:23). To the Jews the idea that the death of a common criminal crucified under Roman law could have any religious significance was abhorrent. To the Greeks the idea that the death of any man for the salvation of others was irrational foolishness, "so much silliness," as Lenski puts it.³⁷ The scandal of the cross was universally offensive in the pagan Greco-Roman first-century world, as it and the record that bears witness to it still are to many.

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Part of that offense, that “scandal,” lies in its particularity. Caiaphas thought it was “expedient” for one man to die for the people (John 18:14). In the divine purpose it was essential: “By one man’s obedience, many will be made righteous” (Rom 5:19). Special revelation was necessary to explain the meaning of that astonishing act of grace and to make it universally known. Humans could not have discovered it or understood it without such assistance. But in our time, under the baneful influence of Enlightenment thinking pushed to its limits, both the act and the explanation are offensive. The scandal of the cross has become the scandal of particularity in our time. One special man, the one of God’s own choosing, and the special revelation that testifies to the meaning of his life and death are equally offensive to the “Greeks” of our day.

Morris argues that this scandal of particularity cannot be avoided because particularity was in the divine purpose from the beginning:

It is what God has done in Israel that matters not what he did in the nations generally, what he did in Jesus that is important, not his action in men in general. It is in the death of Jesus that the atonement for men’s sins was wrought out and not in the deaths of the martyrs who through the ages have lived and died for the truth.³⁸

Authentic Christians can never deny the uniqueness of Christ or his atoning death, for they are integral to the Christian proclamation. Neither can they deny the uniqueness of the special revelation through which the record and the meaning of that life and that death have been made available, the “particularity” of Scripture. The Bible is unique. It holds a special place in the literature of the world, because it is the product of divine revelation. Nothing is comparable with it. It is incontrovertibly special. Morris is absolutely correct when he says, “We do not do justice to the facts . . . unless we see the Bible as unique.”³⁹

Special Revelation as Rational Proposition

We must now address two crucial aspects of the revelatory process, particularly as they relate to special revelation: the extent to which reason is involved, and whether or not special revelation is in any sense propositional.

Revelation and Reason. The centuries-long debate concerning revelation and reason has generally resulted in acknowledgment that reason is an important factor in the human response to revelation. This is to say that revelation would be pointless if those for whom it occurred did not know about it or understand it. In the twentieth-century discussions of revelation the emphasis on revelation as “encounter” has been seen by many as unbalanced, misleading and contrary to the biblical revelation itself. Archbishop William Temple spoke for many, as he still does, when he stated, “revelation can, and in the long run must, on pain of becoming manifest as superstition, vindicate its claim by satisfying reason.”⁴⁰ More recently John Macquarrie has argued strongly in defense of reason as being necessary to understanding the revelatory process, declaring that he “must part company with the many theologians who in recent times have claimed that the content of revelation is a personal encounter.”⁴¹

The importance of reason appears in the Old Testament through the repeated claims that the prophets declared “the word of the Lord” in texts such as Isaiah 1:18, with God’s own invitation to man (sinful) to “reason together,” and the many references to understanding and knowledge throughout

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the Old Testament text. It is, however, in the New Testament, notably (although not exclusively) in the epistles, that the mind and reason are most stressed, perhaps in view of the prevailing emphasis on reason and rational discourse in the Greco-Roman world, which early Christianity wanted to reach with the gospel. Frequent use of words such as mind (*nous*), understanding (*sunesis* and *nous*), knowledge (*gnosis* and *epignosis*), to make known (*gnorizo*) and to consider (*katanoeo*, literally meaning to perceive thoroughly) is sufficient to make it abundantly evident that reason is an essential element in the human response to revelation. In Colossians 2 Paul's hope that believers may have "full assurance of understanding" and "knowledge of God's mystery" (v. 2) follows the revelation already made of that mystery, Christ and the gospel (1:25-27). In Ephesians 1 the "spirit of wisdom and of revelation in the knowledge of him [Christ]" and the "enlightenment" of the Ephesian believers (1:17-18) is contrasted with the "darkened understanding," "futile minds" and "ignorance" of the unenlightened Gentiles (4:17-19). Paul's plea that Christians offer "reasonable"⁴² service and be "transformed" by the renewal of their minds (Rom 12:1-2), his own testimony to serving God with his mind (Rom 7:25) and his exhortation that Christians should be "fully convinced" in their minds (Rom 14:5) combine with much else that could be cited to illustrate just how crucial reason is in the experience of New Testament Christians. It seems indisputable that God's revelation in Scripture is cognitive, addressed to the mind and leading to knowledge and understanding that otherwise would not be attainable.

Reason itself requires objective consideration of all relevant data, and while space does not permit further investigation of this defining human faculty and its role in the revelatory process enough has been said to underline its critical significance. Centuries of theological reflection on the biblical witness and on normal human experience strongly indicate that revelation comes to human beings through words that convey knowledge, that impart understanding and that ultimately lead to self-knowledge and a radical life-changing "encounter" with God. It may be claimed, therefore, that reason among other things, is necessary to

- understand what revelation is,
- perceive how it takes place,
- determine whether or not it has occurred,
- interpret what it means,
- communicate to others its content and consequences.

It is impossible to conceive of any meaningful self-disclosure of God to humans that bypasses the mind and the understanding. Through the special revelation in Scripture, "God stoops to make himself known in ways we can grasp and understand. He comes to us in categories of thought and action which make sense to us."⁴³

The more recent understanding of revelation as primarily "encounter," a nebulous, mystical concept, is the outcome of post-Enlightenment existentialism, itself an unbalanced and unbiblical reaction to reactionary Enlightenment rationalism. Ironically, the revelation to which Scripture and reason bears witness and which conveys knowledge and understanding also leads to a personal, inner experience that far surpasses the mystical, ill-defined "encounter" of existential theology. It asserts "Christ in you, the hope of glory" and "It is no longer I who live, but Christ who lives in

me” and “the Spirit of him who raised Jesus from the dead dwells in you” (Col 1:27; Gal 2:20; Rom 8:11). It is perhaps significant that Joseph Scriven wrote the immensely popular hymn “What a Friend We Have in Jesus” under the influence of the strongly biblical preaching of the Second Great Awakening in North America almost seventy years before Buber published *Ich und Du*. The biblical revelation is rational, cognitive and informative, but it is also redemptive and ultimately relational.

*Revelation as Propositional.*⁴⁴ For most of the past hundred years the belief that revelation occurred through words and statements came under sustained attack. Due largely to the influence of encounter theology the concept of propositional revelation became widely regarded as outdated and even misleading. Paul Helm notes that in the twentieth century the idea was “fiercely controverted” even though it had been regarded “as commonplace” in the earlier centuries of Christianity.⁴⁵ While the attack has abated more recently, the underlying antipathy to it lingers in certain quarters, evident for example in the suspicion with which doctrine is regarded, even rejected, by some and also in the tendency to be selective with regard to which words of revelation to accept.

Bernard Ramm regarded the phrase “propositional revelation” as “inept”⁴⁶ – we might at least agree that it is insufficient – yet the idea it is intended to convey is unequivocally fundamental to the divine-human dialogue. Simply stated it is that God has revealed himself and his purposes through words. We have already seen substantial evidence of the fact that from the beginning God has addressed human beings verbally, firstly through the spoken word and subsequently through the written word. We here make the point that propositional revelation, correctly understood, is a consequence both of the “speaking God” of history and Scripture and the “hearing man” of God’s own creation. It is necessary both on account of God’s own determination to use words in the revelatory process and on account of man’s singular ability to reason, his inherent rationality. Noting the “spiritual importance of the word,” Morris states that “Rational intercourse depends on the use of words” and that it is “not easy to see” how propositional revelation “can be resisted.”⁴⁷

G. E. Ladd asserts that both God’s deeds and his words constitute revelation, but argues that the deeds require the words in order to become of revelatory significance to future generations. “God did not act in history in such a way that historical events were eloquent in and of themselves,” he says. “The historical events are revelatory *only when they are accompanied by the revelatory word.*”⁴⁸ The prime example is God’s supreme self-revelation in the death of Christ. That Christ died is a simple historical fact. But propositional revelation informs us why he died, emphasizing in so doing the love of God. These are not “bare” historical facts, as Ladd explains:

The cross by itself did not speak of love and forgiveness. Proof of this may be found in the experience of those who watched Jesus die. Were any of the witnesses overwhelmed with a sense of the love of God, conscious that he [or she] was beholding the awesome spectacle of atonement being made for his sins? Did John, or Mary, or the centurion, or the High Priest throw himself in choking joy upon the earth before the cross with the cry, “I never knew how much God loved Me”?⁴⁹

Ladd then states, “It was only after the interpretive word was given to the disciples that they came to understand that the death of Christ was revelatory of the love of God.”⁵⁰ The event required explanatory words, propositional statements, indeed a whole series of propositional statements. These statements were incorporated into the New Testament, which became the substance of divine

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revelation for generations to come. Without them, the greatest single revelatory act of God in history, the “Christ event,” would have been lost in antiquity and Christianity would not have survived.

Propositional revelation is a logical and inevitable consequence of the fact that God has spoken to mankind. It is also an inevitable consequence of inherent human rationality and the use of words in normal discourse. Far from being outdated, misleading and irrelevant, propositional revelation demonstrates the shallowness of the ill-defined “encounter,” the Enlightenment alternative to the historical reality. Propositional revelation is also the necessary corollary to God’s will to be known by rational man. Morris concludes, “We need not, accordingly, be surprised at the place words occupy in revelation. They are God’s way of making his truth known to people” and again, “It is only in the measure that we can trust the record that we can apprehend the revelation.”⁵¹

Revelation and Authority

It remains to consider briefly the ultimate question, that of authority. Should God’s revelation in Scripture, the “Word of God,” be regarded as authoritative, that is to say, authoritative in the areas it specifically addresses?

Historically, the answer is clear and unequivocally affirmative. The phrase “Word of God” arises from the Bible’s own testimony about itself and ever since the Reformation, Protestant creeds and confessions of faith have affirmed the authority of the Word in the life and belief of the church and in the lives of individual believers. Two that have influenced Protestant belief in the English-speaking world are the Anglican Thirty-Nine Articles of Religion (1562) and the Westminster Confession of Faith (1643). The former refers to the authority of Holy Scripture, the “canonical books of the Old and New Testament” that “contain all things necessary to salvation.”⁵² Article 1 of the Westminster Confession specifies “the divine authority” of Holy Scripture, to which “the Church is finally to appeal.”⁵³ These two documents alone have shaped Protestantism around the world and reflect the deep conviction of millions of Christians throughout the centuries as well as the nature of historic Protestantism itself. Only the most liberal of liberal theologians would deny any authority to Scripture, although many have come perilously close to doing so in our time.

Of more immediate relevance, however, is that reason requires a similar conclusion. If the Bible is a special divine revelation, received therefore as the very Word of God, it would be irrational to deny it the authoritative status it has been accorded throughout Christian history. If God has spoken, rational man must listen. Morris insists that since revelation has occurred in and through the Bible, “it is a book which has authority.”⁵⁴ There is no logical way of avoiding this conclusion. To think otherwise would be contrary to reason. The attribution of authority to Scripture “follows from the fact” that the Bible testifies to divine revelation.⁵⁵ Packer refers to “the normative authority of Scripture,” explaining that unless “we have direct access to revelation normatively presented, by which we may test and correct our own fallible notions,” we are left “to drift on a sea of speculations and doubts.”⁵⁶

An insidious challenge to the notion of biblical authority arises from the prevailing contemporary mind-set. It is not merely rejection of biblical authority that concerns us, although in the context of the present discussion this is clearly the major issue, but the rejection of authority *per se*. Colin Gunton identifies “the heart of the modern offence with revelation.” It is, he says, “Rooted in the problem of authority and the way it appears to violate human autonomy.”⁵⁷ It is, in short, the pervasive influence

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of humanistic, Enlightenment thinking, the authority of Scripture being its most notable casualty, certainly from a Christian viewpoint. The enthronement of “reason only” over revelation has led to a significantly unreasonable conclusion. In her justly acclaimed analysis of the global battle over God, truth and power in modern society, *The World Turned Upside Down*, Melanie Phillips concludes that the present decline of Western culture results from the Enlightenment and post-Enlightenment assault on the authority of the Judeo-Christian Scriptures. “The attack on Western civilization at its most profound level is an attack on the creed that lies at the very foundation of that civilization.”⁵⁸

Nor is Phillips a lone voice crying in a modern wilderness. Half a century ago Harry Blamires began his perceptive analysis of contemporary Christian thought, *The Christian Mind*, an acknowledgment that Western civilization was in already in deep trouble by the mid-twentieth century, with the startling assertion, “There is no longer a Christian mind,” arguing that contemporary Christianity had “succumbed to secularization.”⁵⁹ The heart of Blamires’s argument is that the true Christian mind is defined by its supernatural orientation, its conception of truth and its acceptance of authority.⁶⁰ “Our age,” he declared, “is in revolt against the very notions that are crucial to Christian thinking and acting.”⁶¹ Contemporary secularism, he went on,

heavily biased as it is towards individualism, subjectivism and atomistic intellectualism, is quickly eroding what remains of the Christian mind, . . . oriented towards a truth revealed, demanding, and divinely guaranteed, whose objective certitude and authoritativeness are alike distasteful to a secularism deeply committed to self-culture as opposed to self-discipline, and to a destiny of mastery as opposed to rigorous service.⁶²

In explaining that the Christian mind is defined by its acceptance of the authority of revelation Blamires wrote,

One cannot seriously contemplate the first elementary truths of Christianity – the doctrine of the divine creation of man and his world, the doctrine of redemption, and the doctrine of the church, without realizing that here is something which is either authoritative and binding or false, deserving of submission or of total neglect.⁶³

More recently David Wells has reminded us that churches with roots in the Protestant Reformation accept that truth is revealed in the Word of God. “There is unanimous agreement,” he says, “that this authoritative truth lies at the heart of Christian life and practice, for this is what it means to live under the authority of Scripture.”⁶⁴ Such is the very essence of Protestant identity. All this, and much more, underlines the binding claims of this special revelation that tells us so clearly of the eternal Christ, the creative Word, and explains what it means to believe in him and to be his disciple. It is an authority that cannot be avoided or evaded for those who claim discipleship. As Blamires so poignantly puts it, “It is either the bowed head or the turned back.”⁶⁵

The claims of biblical authority apply at every level of church life and to each individual Christian. Indeed, Christian authenticity is determined, at least in part, by the response to God’s authoritative revelation in Scripture. Christian leaders, Christian professionals, doctors, teachers, lawyers, writers, pastors and preachers, academics in all disciplines, tradesmen, business executives, parents and students, as well as every professing member of Christ’s body, are all by virtue of their claim to be Christian inevitably subject to the authority of Scripture. Difficult as it may be at

times, the constant eroding pressure of secular, humanistic culture must be recognized for what it is and resisted in the name of authentic Christianity, certainly in the name of authentic Adventist Christianity. At a time when the contemporary challenge to biblical authority was becoming increasingly obvious in the Protestant world, the influential Dutch theologian G. C. Berkouwer pointed out that its authority was threatened not only from without, but also from within, by those who “really do not subject themselves to this authority and do not manifest the reality of their confession in their daily lives.”⁶⁶ These perceptive words are undoubtedly still relevant. It is, in the final analysis, “Either the bowed head or the turned back.”

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2. Paul Helm, *The Divine Revelation* (Westchester, IL: Crossway Books, 1982), xi.
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4. Edward Heppenstall, “The Nature of Revelation” (The Center for Adventist Research, Andrews University, 1960s, ref. 001419), 1.
5. R. Dederen, “The Revelation-Inspiration Phenomenon According to the Bible Writers”, in Frank Holbrook and Leo Van Dolson, eds., *Issues in Revelation and Inspiration*, vol. 1 (Berrien Springs, MI: Adventist Theological Society Publications, 1992), 9.
6. Fernando Canale, *The Cognitive Principle of Christian Theology: A Hermeneutical Study of the Revelation and Inspiration of the Bible* (Berrien Springs, MI: Andrews University Lithotech, 2005), 22.
7. Morris, *Revelation*, 9.
8. J. I. Packer, “Contemporary Views of Revelation”, in C. F. Henry, ed., *Revelation and the Bible* (Grand Rapids, MI: Baker Book House, 1976), 89.
9. The important question of inspiration lies beyond the parameters of this essay, except to note that it is a critical aspect of the revelatory process that has resulted in a book that is divine and human, comparable in this respect to God’s preeminent self-revelation, our Lord Jesus Christ. The divine/human nature of Scripture makes careful interpretation essential. Interpretation, inerrancy and illumination, important though they are, are also not considered simply through limitations of space.
10. “Holy Scriptures”, NKJV: *hiera*, “sacred”, is in the Greek.
11. Quotations from the Bible are from the English Standard Version unless otherwise indicated.
12. R. P. C. Hanson, “Tradition”, in Alan Richardson, ed., *A Dictionary of Christian Theology* (London: SCM Press, 1969), 342. Burn-Murdoch included the dogma of the immaculate conception, substitution of the Lord’s Day for the Sabbath and baptism of infants by affusion as examples of tradition that have superseded the teaching of Scripture. H. Burn-Murdoch, *The Development of the Papacy* (London: Faber and Faber, 1954), 378-379.
13. Diarmaid MacCulloch, *Reformation: Europe’s House Divided 1490-1700* (London: Penguin Books, 2004), 71.
14. Packer, in *Revelation and the Bible*, 91.
15. Alister McGrath, *In the Beginning: The Story of the King James Bible* (London, Sydney and Auckland: Hodder and Stoughton, 2001), 2.
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17. L. Berkhof, *Systematic Theology* (London: Banner of Truth Trust, 1963), 38.
18. “Contemporary” is a relative term, here used mainly of the twentieth century and up until the present time. The complexity of contemporary views of revelation is illustrated in such publications as Paul Helm, *Divine Revelation: The Basic Issues* (London: Marshall, Morgan and Scott, 1982); Colin Gunton, *A Brief Theology of Revelation* (Edinburgh: T&T Clark, 1995).
19. Michael Green states, “It is one of the basic assumptions of the modern critical method that the Bible is in all respects to be treated exactly like any other ancient book,” in Morris, *Revelation*, 8.
20. See, e.g., the views referenced in Bryan W. Ball and William G. Johnsson, eds., *The Essential Jesus* (Boise, ID: Pacific Press, 2002), 12-14.
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22. *Ibid.*, 295.
23. Ned B. Stonehouse, “Special Revelation as Scriptural”, in Henry, ed., *Revelation and the Bible*, 77-78.
24. Morris, *Revelation*, 21.
25. *Ibid.*, 22.
26. *Ibid.*, 28.
27. From the conclusion to his *Critique of Practical Reason* (1788).
28. Some are reluctant to concede that “general revelation” amounts to revelation at all. John Macquarrie prefers to think of it as providing “a general possibility of revelation,” *Principles of Christian Theology* (London: SCM Press, 1966), 51.
29. Gordon Clark, “Special Divine Revelation as Rational”, in Henry, ed., *Revelation and the Bible*, 28.

30. The divine *Logos*, the “Word” of God, who was with God from the beginning (John 1:1-2) and who was God, himself the source and substance of divine revelation, is characterized by a word of great profundity, *logos*, which also carries in it the inherent meanings of reason, mind, speech and communication. It is ideally suited to convey the essence of revelation.

31. See, e.g., the chapter by Pierre Marcel, “Our Lord’s Use of Scripture” in Henry, ed., *Revelation and the Bible*.

32. This is not to overlook the distinctions between the two and the supremacy of the incarnate Word, as set forth for example in Hebrews 1:1-3.

33. Clark in Henry, ed., *Revelation and the Bible*, 29.

34. Morris, *Revelation*, 44.

35. Stonehouse in Henry, ed., *Revelation and the Bible*, 84.

36. Morris, *Revelation*, 47.

37. R. C. H. Lenski, *The Interpretation of I and II Corinthians* (Minneapolis, MN: Augsburg Publishing House, 1963), 67.

38. Morris, *Revelation*, 47.

39. *Ibid.*

40. William Temple, *Nature, Man and God* (Edinburgh: T&T Clarke, 1934), 396.

41. Macquarrie, *Christian Theology*, 96.

42. The rare Greek word *logikon* translated “reasonable” in many English versions signifies rationality; see A. Souter, *A Pocket Lexicon to the Greek New Testament* (Oxford: Clarendon Press, 1960) 147; cf. the marginal notes in ESV and NKJV.

43. Clark Pinnock, “Revelation”, in S. B. Ferguson and D. F. Wright, eds., *New Dictionary of Theology* (Leicester, UK and Downers Grove, IL: InterVarsity Press, 1996), 587.

44. Proposition in the sense in which it is generally used in discussions of revelation means, of course, more than “assertion” or “proposal” but words in the broader sense. Thus Scripture, while a verbal revelation, is more than bald theological assertions.

45. Helm, *Divine Revelation*, 21-22.

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47. Morris, *Revelation*, 117-118.

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49. *Ibid.*

50. *Ibid.*, 31.

51. Morris, *Revelation*, 118.

52. See E. Cardwell, *Synodalia* (Oxford: Oxford University Press, 1842, reprinted 1966), 56.

53. See H. Bettenson, ed., *Documents of the Christian Church* (Oxford: Oxford University Press, 1963), 245.

54. Morris, *Revelation*, 138, 136.

55. *Ibid.*, 136.

56. Packer in Henry, ed., *Revelation and the Bible*, 96, 99.

57. Gunton, *Theology of Revelation*, 32.

58. Melanie Phillips, *The World Turned Upside Down* (New York and London: Encounter Books, 2010), 316.

59. Harry Blamires, *The Christian Mind, How Should a Christian Think?* (Ann Arbor, MI: Servant Books, 1963), 3.

60. He also includes its awareness of evil and its concern for the person.

61. Blamires, *The Christian Mind*, 132.

62. *Ibid.*, 130.

63. *Ibid.*, 132. See also David F. Wells, *No Place for Truth, or Whatever Happened to Evangelical Theology?* (Grand Rapids, MI and Cambridge, UK: William B. Eerdmans, 1993), *passim*, but especially 99-106, 279-282.

64. Wells, *No Place for Truth*, 99.

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Chapter 2

THE TRANSMISSION AND CREDIBILITY OF THE GENESIS TEXT

Robert K. McIver

Behind the book of Genesis is a remarkable tale of preservation through some very difficult times. This chapter will trace some of the challenges faced in the safeguarding and transmission of the written text over a period of more than two millennia. Evidence will be provided that will enable an assessment to be made as to how well the text of Genesis has been maintained over these centuries.

The Challenge of Accurately Transmitting a Text by Means of Copying

The invention of printing brought with it a remarkable change in the method used for preserving the text of the Bible. This is because printing made possible the production of a large number of exact copies of a text. That many copies were produced safeguarded against the accidental destruction of one or more of their number. Furthermore, the number of variations in the Hebrew text of Genesis has been near zero since the printing of the first complete Hebrew Bible in 1488.¹ But prior to this point in history, when a copy of Genesis wore out through long use, it could only be preserved by careful copying by trained professionals known as scribes. Scribes are mentioned in both the Hebrew Bible and the New Testament (2 Kings 12:10; Ezra 7:6; Matt 2:4; 13:52; Acts 23:9). Their work revolved around producing and preserving written texts of various kinds, including records of various kinds for the state,² religious and philosophical texts and writings of a more private nature. Even the best scribes make mistakes in their copying from time to time. A mistake in the copying process means that the copied text varies from its original (*i.e.*, gives rise to a “variant”). If a copy with a variant is carefully copied thereafter, then any subsequent copies based on the text with the variant will continue to have that specific variant in it.

There are several ways in which a scribe can make a mistake in copying a text. For example, all forms of copying rely on the scribe remembering a set of words for a short time. As they write out what they remember, scribes may unconsciously correct the grammar of what has been heard or read, or they might substitute a synonym for one of the words. Other types of mistakes are dependent on how a copy is being produced. Where a copy is being made by one scribe reading aloud to a number of others who write down what they hear, a scribe may mishear a word and write down a word that makes sense in the context but which is not the exact word that was in the original.

A different set of variants can be traced to a process of copying where one scribe works from an original, and copies directly from it. One should not overemphasize the number and importance

of such variants, but they are an inevitable by-product of this process of copying. For example, while the letters in Hebrew manuscripts were divided into words much earlier than they had been for the Greek New Testament, it was still possible for the eye of a scribe to miss a couple of lines of text, or to go to another copy of the word he had just written that occurs further down the page in the original. This type of error goes under the impressive name of *homoioteleuton*, rare enough, but known from the texts that have survived.³

Other variants can be traced to the fact that some letters in Hebrew are quite like each other (e.g., ד – the Hebrew letter for a “d” sound; and ר – the Hebrew letter for an “r” sound) and sometimes it is possible to confuse them and still read a word that makes sense in the context.⁴ Take for example, the descendants of Javan: should they include Dodanim (Gen 10:4) or Rodanim (1 Chr 1:7)? It is clear from the context that these are, in fact, two different names for the same individual. The only difference between the two names is in the first letter, and that difference is highly likely to be traced back to a scribe who mistook a ד (Dodanim) for a ר (Rodanim) or vice versa.⁵ As can be seen in the example just given, the changes introduced to the text by these kinds of errors are usually very minor. After all, the difference between Dodanim (Gen 10:4) or Rodanim (1 Chr 1:7) hardly affects the basic meaning of the passage. But a careful scribe would always try to avoid introducing even these small variations into a text that was being copied.

The Work of the Masoretes

The various possibilities for copyist errors were well known in the ancient world, and extraordinary lengths were taken so that the text of the Hebrew Bible was copied accurately. Not surprisingly, we know more about the process used for copying from the medieval period than we do for earlier periods. Thus, it is probably helpful to begin by describing what is known best – with the work of a group of scribes called the Masoretes (or Massoretes) – and then work backwards to those times about which less is known.

Today’s standard Hebrew Bible, the *Biblia Hebraica Stuttgartensia* (abbreviated as BHS) is based on the earliest complete manuscript of the Hebrew Bible – Codex Leningradensis (abbreviated as L).⁶ L will continue to be the basis of the *Biblia Hebraica Quinta* (abbreviated BHQ), the replacement for BHS that is currently under development. In their general introduction to the first part of BHQ to be published, the editors report on their discussions as to whether to continue to use L as the base text. Despite there being some earlier manuscripts of parts of the Hebrew Bible, they remained with L because “M¹[the Masoretic text of L] remains the earliest known manuscript of the entire Hebrew Bible,” quite aside from the pragmatic reason that L was already available in electronic form.⁷ The manuscript L was copied around AD 1008, and is significant for our purposes in that it is a product of the Masoretic scribes (fl. AD 500 to c. 1000).⁸

The term “Masorete” comes from the many accompanying notes of Masoretic manuscripts called Masorah (or Massorah). These notes include a great deal of information important for somebody who is copying the text. For example, if a word required a note in the margin a little circle was put on top of the word. Thus, if a word is only found once in the Hebrew Bible in a particular form, a circle is placed over it in the text, and the Hebrew letter *Lamed* with a dot over it (ל̣) is put in the margin. Where a word occurs in a particular form only twice, it is again marked with a small circle, but this time the Hebrew letter *Beth* with a dot over it (ב̣) is placed in the margin. Also noted

The Transmission and Credibility of the Genesis Text

are various other unusual constructions and where they may be found in the Hebrew Bible. So useful and important are these notes, that many of them are included in the margins of the BHS, while the rest are available through footnotes making reference to the second volume of BHS, which contains the complete set of Masorah for L.⁹

More importantly for us, perhaps, the Masoretes were also responsible for the addition of the vowels that appear above and below the text of the Hebrew Bible. When originally written, the Hebrew Bible consisted of only consonants. If a language is well known to the reader, it is quite possible to read the wrds wtht vwls tht mk p cnsnntl txt (*i.e.*, words without vowels that make up a consonantal text). But even by New Testament times, it is likely that Hebrew was very much a minority language in Palestine, and one of the important functions in learning to read the Hebrew Scriptures was to learn how the various words should be said. While some of the longer vowels had been added to the Hebrew text at a quite early date and are found in the manuscripts from Qumran, it may have been as late as the late ninth century AD that a complete system of vowels was added.¹⁰ Because of the great respect of the Masoretic scribes for the text, they chose not to add the vowels between the letters of the words, but above and below them, as a set of dots and other marks (hence adding vowels produces what is called a “pointed text” – *i.e.* a text with vowel points added).

In adding these vowels, the Masoretes made accommodation for various traditions that had arisen for the reading of the text. For example, the extreme reverence given to God and to his name meant that pious Jews had long had the practice of not pronouncing the name YHWH, one of the most revered names of God, nor even reading it aloud from the Hebrew Bible. In fact, because the name was never said aloud for many hundreds of years, it is impossible to know for sure today how this particular name of God was originally pronounced. Most modern scholars, though, think it might have originally been pronounced “Yahweh.” When reading from a text that contained this name for God, it was customary to substitute the Hebrew word for “lord” (Adonai). What was written in the text is known as the written or *Ketib* form; what was said aloud was known as the *Qere* form. To indicate this, the Masoretes left the original consonants in the text, but added the vowels for what should be read instead. Hence the name YHWH (Yahweh) was given the vowels from Adonai, which in the Middle Ages led to the hybrid word “Jehovah.” This substitution is called a perpetual *Qere*, and is found frequently enough that it is not accompanied by a marginal note. Less frequently occurring *Qere* forms are accompanied by a marginal note indicating what should be read aloud.

Scribal Care During Rabbinic Times

From what has been recorded it can be observed that the Masoretes took great pains when copying the text of the Hebrew Bible. They ensured that the unusual features of the texts were maintained, and were diligent in eliminating errors from their work. In doing this, they were continuing the efforts of scribes from earlier periods, such as those active during the time that the Mishnah and Talmud were formed (first to seventh century AD).¹¹ While rabbinic works such as the Mishnah and Talmud deal primarily with the interpretation of the law and stories that illustrate how the law should be kept, from time to time comment is made about the work of a scribe who has copied texts from the Hebrew Bible. From these comments we know, for example, the following facts about the text of the first five books of the Hebrew Bible: Genesis, Exodus, Leviticus, Numbers and Deuteronomy, known collectively as “the Torah” (Law or Teaching). In this entire text:

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- The middle consonant was the letter “w” in the word “belly [of a reptile]” (Hebrew letters “ghwn”) in Leviticus 11:42;
- the middle word was the word “sought” in Leviticus 10:16; and
- Leviticus 13:13 was the middle verse.¹²

These statistics were used to check how accurately a manuscript had been copied. Even a missing letter would be detected by actually counting the number of letters to the middle letter. If the number was incorrect, then the mistake could be sought out. That this was a slow and careful process can well be imagined, but such was the care taken to accurately transmit the text during the rabbinic period. There was even a functionary who was paid from the temple treasury to check the accuracy of copies of the scrolls of the Hebrew Bible.¹³

The rabbinic traditions reveal the extreme care with which copies of the Hebrew Bible were made during that time. Scribal practices from before the rabbinic period have to be inferred from the surviving evidence. Relevant evidence includes the manuscript of the Torah preserved by the Samaritans, ancient translations such as the Septuagint, and from the manuscripts found in the vicinity of the Dead Sea.

The Septuagint and Other Early Greek Translations

The Greek translation of the Hebrew Bible – called the Septuagint (LXX) – is an important witness to the text of the Hebrew Bible from the second century BC, a good one thousand years earlier than Masoretic manuscripts such as L. The LXX originated in Alexandria in Egypt, where there was a considerable Jewish population who spoke Greek, and various dates for its translation have been suggested.¹⁴ The Hebrew manuscripts from which it was translated have been lost, but some of the features of the resultant translation show that these manuscripts did have some important differences from those that formed the basis of Masoretic texts such as L. For example, the LXX contains some chapters and indeed whole books, not found in the Hebrew Bible. The additional works include 1-4 Maccabees, which describe a successful Jewish revolt that won independence from the Seleucid rulers of Mesopotamia, and Ecclesiasticus – a collection of wisdom sayings. The writings that are common between the Hebrew Bible and the LXX show various levels of congruence. Some LXX books – such as Genesis – are quite close to the Masoretic text, but others, such as Jeremiah, are quite different. The Masoretic text of Jeremiah is considerably longer than that of the LXX, and some of the oracles against the nations occur in different places in the two versions.¹⁵

Just what should be concluded from these differences between the LXX and the Masoretic texts of the Hebrew Bible has long been a matter of debate. Despite the fact that the LXX quickly established itself as the Bible of the early Christian Greek-speaking church and appears to underlie many of the Hebrew Bible citations in the New Testament, Luther rejected from his Bible all the books and chapters found in the LXX that were not in the Hebrew Bibles known to him. This decision has been followed within Protestant traditions to this day. Roman Catholics, however, still retain seven of the additional books in their Bible (Tobit, Judith, Wisdom of Solomon, Sirach, 1 and 2 Maccabees and Baruch, as well as some additions to Daniel and Esther). In Catholic Bibles they are interspersed among the other books. “The additional books are sometimes called Deuterocanonicals. . . . They are also known as the ‘Apocrypha,’ a term meaning ‘hidden’ or ‘secret.’ ”¹⁶

The Transmission and Credibility of the Genesis Text

One likely explanation for some of the differences between the Masoretic text and the LXX is that they have arisen out of the translation process. Different languages express things in different ways. It is a matter of considerable judgment how close a translation should stay to the original. If one translates literally, and tries to keep translating one original Hebrew word with one Greek word, the resulting translation can sometimes either be nonsense in Greek, or convey a meaning different to that of the original. The suggestion has been made that some of the translators of the LXX may have been deliberately seeking the most literal translation, and in doing so translated less skillfully than their actual ability. Georg Walser observes that “there is good reason to believe that the ability of the translators was higher than is shown by the translation of the Pentateuch.”¹⁷ On the other hand, freer translation takes one further and further from the original text. Also there is the not-unlikely possibility that the translator may lack sufficient skills in one or other language, or that the meaning of an ancient language has been entirely lost at the time the translation was made.¹⁸ Certainly the quality and style of translation varies from book to book. The Torah in the LXX was translated rather literally, while Job, Esther, Proverbs, Isaiah and Daniel have been translated rather freely.¹⁹ Yet not all of the differences between the Hebrew Bible and the LXX can be accounted for by differences in translation technique. It was the discovery of the ancient scrolls near the Dead Sea that have provided the best means to evaluate the evidence of the LXX, a topic that will be taken up later in this chapter.

The Samaritan Pentateuch

The Samaritan Pentateuch is another very important witness to what the Old Testament was like before rabbinic times. The Samaritans have always been a small community who were devoted to the worship of God at a temple they had built on Mount Gerizim (*cf.* John 4:20) near biblical Shechem.²⁰ The modern Samaritan community traces its origins back to a split between themselves and the Jews returning from Babylonian exile who were rebuilding the Jerusalem temple (Ezra 4:1-5). There is some debate as to what extent the groups mentioned in Ezra 4 overlap with the Samaritans. Magnar Kartveit goes so far as to say, “The moment of birth of the Samaritans was the construction of the temple on Mount Gerizim. The people who erected it did exist before that moment, but they were not Samaritans until the temple project got under way.” He also points out that archaeological evidence places the building of the temple to the fifth century BC – the Persian period.²¹ This date is important to the transmission of the Genesis text because the Samaritan Bible consists of a very ancient version of the Torah, which traces its origin right back to the time of the founding of the community. The Samaritan scriptures do not include either the Prophets or Writings found in the Hebrew Bible, but accept only the first five books of Moses (the Pentateuch). The Samaritan Pentateuch is written in a form of the ancient Hebrew script used before (and after) the Exile, and is written entirely in consonants. In other words, as was the case with the Hebrew Bible at the time of Jesus, the vowels that must be added in reading exist only in oral tradition.

While the oldest manuscripts of the Samaritan Pentateuch are from the medieval period, they represent an independently transmitted text from very ancient times. This text has some features that are considered unlikely to be part of the original text – such as explicit commands to worship only on Mount Gerizim, but even so, still preserves a very old textual tradition. The Old Testament scholar Bruce Waltke states that one of the “primary values” of the Samaritan Pentateuch for the

literary criticism of the Old Testament is that it “points up the relative purity of the Masoretic text” and that it “helps to establish the antiquity of the Pentateuch.”²² As with the LXX there has been a long debate as to the relative merits of some of the readings found in the Samaritan Pentateuch. It was the discovery of the Dead Sea Scrolls that enabled some clarification in this matter.

The Dead Sea Scrolls

Just how successful ancient scribes were in their attempts to transmit the text of the Hebrew Bible with great accuracy received remarkable confirmation in the discoveries of ancient manuscripts, now known collectively as the Dead Sea Scrolls, found in the region of the Dead Sea more than fifty years ago. The most important collections of these manuscripts were found in caves close to some ruins at a place called Khirbet Qumran. It is conjectured that many of the more important manuscripts owned by the so-called Qumran community were hidden for safekeeping in nearby caves during the terrible events surrounding the Jewish revolt from Rome that culminated with the destruction of the temple at Jerusalem in AD 70. For some reason, nobody came back to recover these scrolls and they remained hidden until their discovery, beginning in 1947.

In their book, *The Meaning of the Dead Sea Scrolls*, James VanderKam and Peter Flint provide an excellent summary of the archaeology and other methods used to date the occupation of the Qumran site and the scrolls found nearby. They point out that archaeology suggests that the first buildings were erected during the reign of John Hyrcanus (134-104 BC), that it was damaged in an earthquake in 31 BC, rebuilt and destroyed sometime between AD 68 and 73, after which it was used as a military post until the end of the first century, and again briefly during the second revolt against Rome (AD 132-135).²³

Several of the scrolls were in very good condition, including one nearly complete copy of the book of Isaiah and another with substantial portions of many chapters of the same book. Other scrolls had deteriorated, some quite badly, leaving only a few scattered pieces. Between them, however, along with manuscripts dealing with the specific interests of the community, the Qumran discoveries include at least a fragment of every book in the Hebrew Bible except Esther,²⁴ in some instances extensive fragments.²⁵ There were, in fact, fragments of several copies of many books including Genesis (fragments of twenty different original manuscripts), Exodus (sixteen), Deuteronomy (thirty), Isaiah (twenty-one) and Psalms (thirty-seven).²⁶ There were even fragments of several copies of Genesis, Leviticus and Deuteronomy written in the old Hebrew script that was used before the Exile, although these copies were made about 100 BC.²⁷ Some of the manuscripts were already quite old by the time they were hidden in the caves during the first Jewish revolt against Rome. The complete copy of Isaiah (1QIsa^a)²⁸ was produced sometime before 100 BC.²⁹ Thus, the discoveries at Qumran and other places in the deserts surrounding the Dead Sea have provided access to manuscripts that were, in many cases, well over one thousand years older than the earliest previously known manuscripts.

Given that later manuscripts such as L were preserved by copying for a period of at least one thousand years after the time that the Qumran scrolls were originally copied, scholars were very interested to see how much the manuscripts had varied over that time. Some of the changes were expected; for example, the texts lacked the vowel points that were in texts such as L. There were some things that were the same that they had expected to be different – even though Greek texts

from this time period were written without gaps between the words; words were separated in the Qumran manuscripts. Most importantly, though, many of the texts from Qumran were very close indeed to the texts that had been preserved by the Masoretes.³⁰ These have been described as proto-Masoretic texts, as they belong to the Masoretic text tradition, but predate the Masoretes. Given the challenges of accurate copying, that the texts had been so well preserved over such a long period of time is quite remarkable.

On the other hand, some of the Qumran texts appeared to have the characteristics noted in the Septuagint translation. In particular, two Hebrew fragments of Jeremiah (4QJer^b and 4QJer^d) have words that correspond to the shorter text of the LXX, and share the rearrangement of sections of the LXX version of Jeremiah. Other texts appear similar to that of the Samaritan Pentateuch, while others have features of more than one of these types of text.³¹ Emanuel Tov estimates that 60 percent of the Qumran texts from works found in the Hebrew Bible follow the proto-Masoretic text type, 5 percent are related to the text of the Samaritan Pentateuch, and a further 5 percent appear to be related to the text type of the LXX. Of the remaining texts, Tov says that about 20 percent of them follow what he describes as texts written in the “Qumran Practice.” Such texts (*e.g.*, 1QIsa^a) “reflect a free approach to the Biblical text which is reflected in adaptations of unusual forms to the context, in frequent errors, in numerous corrections, and sometimes, also, in negligent script.” Other texts exist that he classifies as “non-aligned texts.”³²

The Qumran statistics are very interesting, in that they highlight that the clear majority of Qumran texts of works found in the Hebrew Bible are of the Masoretic text type. Indeed, some of the Greek translations found at Qumran tend to move the LXX translation closer to the Masoretic text.³³ Thus, while the Dead Sea Scrolls do not answer all the questions raised by the LXX and the Samaritan Pentateuch, they clearly show that as early as the second and first centuries BC, the main text type of the Old Testament was proto-Masoretic.

A Remarkable Tale of Survival

New discoveries are made by archaeologists almost every day, and it is impossible to predict whether or not earlier manuscripts of the Hebrew Bible than those found in the region of the Dead Sea may emerge. But at the present time, the Dead Sea Scrolls are the earliest known evidence on which we can evaluate the care with which the text of Genesis and the other works in the Hebrew Bible were copied. What, then, can be said about the period between the writing of Genesis and the first manuscripts that have survived, a period that could be more than a thousand years?

First, it should be noted that it is more than a little remarkable that Genesis and the other writings of the Hebrew Bible have survived at all. They describe the escape of a group of slaves from Egypt, who after hundreds of years of eking out an existence in the marginal hill country of Canaan, finally conquered the whole country under the leadership of their second king, David, around 1000 BC. David and his son, Solomon, sponsored the worship of the one God, Yahweh. David's court and his capital city were very small, even by the standards of his day. It is estimated that at the time of David, the entire population of Jerusalem was only about two thousand and that this had expanded to perhaps five thousand inhabitants by the time of Solomon.³⁴ These numbers would include some of David and Solomon's standing army, their courts, and the priests and other functionaries associated with the tabernacle/temple. That there were scribes associated with both the

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courts of David and Solomon is clear. For example, a list of important functionaries of David's court included the head of the army, chief ministers, two priests, an official recorder and an official scribe (2 Sam 8:15-18). The recorder and scribe were thus part of the inner circle of David's administration. The scribes Elihoreph and Ahijah were listed amongst the princes at Solomon's court (1 Kings 4:3), another indication of the importance of the scribes at court. That these court scribes would have been trained in careful copying is highly likely, although whether the duty of producing copies of the holy writings belonged to them or to functionaries of the temple is not discernible.

In any event, because of their official sponsorship, during the reigns of David and Solomon there would have been little danger to the religious texts associated with the worship of Yahweh. Their careful preservation and copying would have been attended to as a matter of course. How many copies of key religious texts existed during this time is impossible to estimate, but because of the great expense associated with their production, it is unlikely to have been a great number, many of which are likely to have been associated with the temple in some way. But further challenges to the preservation of texts associated with the worship of Yahweh arose from the fact that, as both 2 Kings and 2 Chronicles outline, kings who were official sponsors of the worship of the one God, Yahweh, were actually a minority during the period of the two kingdoms of Israel and Judah.

The kings of Israel and Judah are evaluated in one of two ways in 2 Kings. They either did evil in the sight of the Lord, or they did right in the eyes of the Lord. Interestingly enough, a positive judgment is only given to kings of Judah, and of them only eight of the twenty who ruled. Asa, Jehoshaphat, Jehoash, Amaziah, Azariah, Jotham, Hezekiah and Josiah are all said to have done what was right in the eyes of the Lord. In the judgment of 2 Kings, then, all the kings of Israel and most of the kings of Judah are said to have done evil in the sight of the Lord! Second Kings 21:1-9 even recounts that King Manasseh erected altars to the host of heaven in the temple courtyards, and set a graven image of Asherah in the temple originally built by Solomon for the worship of Yahweh. Things had reached such a state that knowledge that the book of Deuteronomy even existed had been lost. It was rediscovered when the temple was being restored under King Josiah (2 Kings 22:8-10). Thus, the existence of the holy books of Yahweh was precarious during the time period of the kings of Israel and Judah. But worse was to come. First, the northern kingdom of Israel was destroyed in 722/721 BC, and the southern kingdom of Judah fell to the Babylonians in 587/586 BC. The destruction of Jerusalem was particularly thorough. The whole city was burned to the ground, its walls destroyed and most of its people deported to Babylon (2 Kings 25:8-11). That the holy writings were amongst the few things that survived this terrible destruction, and that they were treasured and maintained in Babylon – a foreign land – is remarkable.

Only a small group of Jews returned from the Babylonian exile to rebuild the temple at Jerusalem, which was finished approximately 515 BC.³⁵ Prominent amongst these returning exiles was a certain scribe called Ezra, who was both a scribe and a priest (Ezra 7:1-11). Rabbinic tradition gives great prominence to the role that Ezra played in gathering together the materials that are in the Hebrew Bible, including the works of the prophets who had prophesied during and just after the Exile in Babylon.

What can be said about the accuracy of the copies made during the period of the monarchy, Exile and the immediately post-Exilic times? Of crucial importance is the fact of sporadic royal sponsorship of the worship of the one God, Yahweh. Such sponsorship would have meant the provision of skilled

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scribes allocated to the task of copying manuscripts that were in need of replacement. While one cannot know for sure that these scribes would have been as meticulous in their care to avoid copying errors as were the scribes of later times, the work of later scribes shows how accurately trained scribes can work. Indeed, the evidence from rabbinic and Masoretic times reveals that skilled scribes not only sought to preserve ancient documents by copying them with great accuracy, but where it is possible to check their work on the Hebrew Bible using such evidence as the Dead Sea Scrolls, they succeeded in their aim of faithfully preserving the text. Consequently, as James Barr points out, “The Hebrew manuscript text of the Old Testament shows a high degree of uniformity. This characteristic constitutes a peculiarity of Old Testament textual criticism.”³⁶

The Credibility of Genesis in the Light of Nearly 2500 Years of Copying

What, then, can be concluded about the credibility of Genesis given that it was preserved by a process of copying that could have lasted up to twenty-five hundred years? Like the rest of the Hebrew Bible, the text of Genesis was very carefully copied by skilled scribes for most of this time period. It must be conceded that copying would inevitably introduce changes into a text, and that there is evidence for some such changes. On the other hand, there is substantial evidence that great care was taken in copying the text of the Hebrew Bible at each stage for which there is surviving evidence. The Masoretic scribes were inheritors of a strong tradition of careful scribal practice, a tradition that is detectable in the rabbinic writings and in the oldest substantial manuscripts of the Hebrew Bible found at Qumran. This evidence suggests that the changes that have occurred as the text of Genesis was copied would have been few in number, and unlikely to have changed the basic meaning of the text.

The stories in Genesis comprise some of the earliest texts that found their way into the Hebrew Bible. As part of the five books of the law, the “Torah,” the text of Genesis appears to have been given very great respect from the earliest time. This is the most likely reason for the very literal translation of Genesis that is found in the Septuagint. Genesis is also one of the works for which there was a great number of different manuscript copies kept at Qumran. Thus, the text of Genesis has one of the best surviving bodies of manuscript evidence from which a judgment can be formed as to the text of its earliest copies.

The “textual history” of Genesis, like that of the whole Hebrew Bible, is one of remarkable survival and of great care taken in ensuring that accurate copies were made. Most who know about this history conclude that while the credibility or otherwise of the book of Genesis depends on many factors, whether or not an accurate copy of the original text has survived is not one of them. The text we have today, while it may show some minor changes, is essentially what was originally written, a fact that strongly suggests that the text of Genesis is indeed credible.

NOTES AND REFERENCES

1. Ellis R. Brotzman, *Old Testament Textual Criticism: A Practical Introduction* (Grand Rapids, MI: Baker Book House, 1994), 59; see also Bleddyn J. Roberts, *The Old Testament Text and Versions: The Hebrew Text in Transmission and the History of the Ancient Versions* (Cardiff: University of Wales Press, 1951), 85-91.

The first portion of the Hebrew Bible to be printed was the Psalms, in 1477, while the Prophets were printed in 1485-1486 in Soncino and the Writings in 1486-1487 in Naples.

2. The following sources are mentioned explicitly in the Hebrew Bible: “Book of Jasher” (Josh 10:13; 2 Sam 1:18); “Book of the Acts

of Solomon" (1 Kings 11:41); "Book of the Chronicles of the Kings of Judah" (e.g., 1 Kings 14:29; 22:45; 2 Kings 8:23; 12:19); "Book of the Chronicles of the Kings of Israel" (e.g., 1 Kings 14:19; 15:31; 2 Kings 1:18; 10:34). Many of these appear to be official court records. One can only speculate on the reaction if one of these accounts were to be found by an archaeologist.

3. The editors of the *New Revised Standard Version* (NRSV) have included some words after First Samuel 10:27, which are found in a manuscript from Qumran (4QSam*) but which are not found in the standard (Masoretic) text of 1 Samuel 10 used by previous Bible translations. First Samuel 10:27-11:1 from the NRSV reads: "But some worthless fellows said, 'How can this man save us?' They despised him and brought him no present. But he held his peace. Now Na'hash, king of the Am'monites, had been grievously oppressing the Gad'ites and the Reu'benites. He would gouge out the right eye of each of them and would not grant Israel a deliverer. No one was left of the Israelites across the Jordan whose right eye Na'hash, king of the Am'monites, had not gouged out. But there were seven thousand men who had escaped from the Am'monites and had entered Ja'besh-gil'ead. About a month later, Na'hash the Am'monite went up and besieged Ja'besh-gil'ead." This text may be compared to 1 Samuel 10:27-11:1 in the *Revised Standard Version* (RSV) that follows the Masoretic text: "But some worthless fellows said, 'How can this man save us?' And they despised him, and brought him no present. But he held his peace. Then Nahash the Ammonite went up and besieged Ja'besh-gil'ead." The NRSV editors added the additional words because the standard text of 1 Samuel 10 appears to lack some information provided by the words found in 4QSam*, and it was concluded that a scribe had omitted the words through a process of *homoioteleuton*; Eileen Schuller, *The Dead Sea Scrolls: What Have We Learned 50 Years On?* (London: SCM, 2006), 43-44. Cf. other examples of possible *homoioteleuton* in Roberts, *Text and Versions*, 96, and Emanuel Tov, *Textual Criticism of the Hebrew Bible* (Minneapolis, MN: Fortress, 1992), 238-240.

4. In fact, two sets of possible errors can arise from mistaking letters of the alphabet that are quite alike, as a different Hebrew script was used before the Exile in Babylon compared to the one that was introduced after the Exile and that eventually replaced it. Both scripts have letters that can be mistaken for each other (not necessarily the same letters).

5. Tov, *Textual Criticism*, 12-13, lists other examples of variants that appear to have arisen from mistaking one letter for another; as does Roberts, *Text and Versions*, 92-93.

6. Karl Elliger and Wilhelm Rudolph explain in the foreword to BHS: "There is no need to defend the use of the Leningrad Codex B19A (L) as the basis for any Bible. . . . In any event, L is still 'the oldest dated manuscript of the complete Hebrew Bible'" *Biblia Hebraica Stuttgartensia*, 4th edn. (Stuttgart: Deutsche Bibelgesellschaft, 1990), xi.

7. *Biblia Hebraica Quinta Editio cum Apparatu Critico Novis Curis Elaborato: General Introduction and Megaloth* (Stuttgart: Deutsche Bibelgesellschaft, 2004), ix. They also point out that the year of the production of L is given in five different calendars, which yield dates between AD 1008 and 1013, although they think 1008 is the most likely, xix.

8. Brotzman, *Textual Criticism*, 49-55.

9. The complete Masorah for L may be found in G. E. Weil, ed., *Massorah Gedolah iuxta codicum Leningradensem B 19 a* (Rome: Pontifical Biblical Institute, 1971).

10. Roberts, *Text and Versions*, 60. Several versions of vowel systems were developed and some variation can be observed between L and some manuscripts from the same era regarding which vowels belong on which words. See Tov, *Textual Criticism*, 43-50.

11. Fred Skolnick, ed., *Encyclopaedia Judaica*, 2nd edn. (Detroit and Jerusalem: MacMillan, Keter, 2007), 19:470.

12. Babylonian Talmud, *Kiddushin* 30a.

13. Babylonian Talmud, *Ketubbot* 106a.

14. The so-called Letter of Aristeas that is cited by first-century writers dates the translation to the reign of the Ptolemy II Philadelphus (285-246 BC). Some modern scholars have dated it as late as 100 BC. Natalio Fernández Marcos dates it between 127 and 118 BC, and most scholars appear to accept dates around this time: *The Septuagint in Context* (Boston and Leiden: E. J. Brill, 2001), 41. See also Arie van der Kooij, "The Promulgation of the Pentateuch in Greek According to the Letter of Aristeas", in Anssi Voitila and Jutta Jokiranta, eds., *Scripture in Transition: Essays on Septuagint, Hebrew Bible, and Dead Sea Scrolls in Honour of Raija Sollamo* (Leiden and Boston: E. J. Brill, 2008), 179-191.

15. In the Masoretic text the oracles against the nations are found at the end of the Jeremiah, in the LXX in the middle (after 25:13 [v. 14 missing in the LXX]). Their order is also different; Masoretic text has the order: Egypt (40:2-28), Philistia (47:23-27), Moab (ch. 48), Ammon (49:1-6), Edom (49:7-22), Damascus (49:23-27), Kedar (49:28-33), Elam (49:34-39), Babylon (chs. 50-51). LXX has the order: Elam, Egypt, Babylon, Philistia, Edom, Ammon, Kedar, Damascus, Moab.

16. Daniel J. Harrington, *Invitation to the Apocrypha* (Grand Rapids, MI: William B. Eerdmans, 1999), 4.

17. Georg Walser, "The Greek of the Bible: Translated Greek or Translation Greek", in Voitila and Jokiranta, eds., *Scripture in Transition*, 456.

18. These possibilities are canvassed by both Anthony Gelston, "Some Difficulties Encountered by Ancient Translators", 47-58, and Jan de Waard, "Lexical Ignorance and the Ancient Versions of Proverbs", in Y. A. P. Goldman, A. van de Kooij and R. D. Weis, eds., *Sôfer Mahir: Essays in Honour of Andrius Schenker Offered by Editors of Biblia Hebraica Quinta* (Leiden and Boston: E. J. Brill, 2006), 261-268.

19. Jan Joosten, "Reflections on the 'Interlinear Paradigm' in Septuagintal Studies", in Voitila and Jokiranta, eds., *Scripture in Transition*, 177.

20. The temple was destroyed c. 129/128 BC.

21. Magnar Kartveit, *The Origins of the Samaritans* (Leiden and Boston: E. J. Brill, 2009), 351, 207.

22. Bruce K. Waltke, "The Samaritan Pentateuch and the Text of the Old Testament", in J. B. Payne, ed., *New Perspectives on the Old Testament* (Waco, TX: Word Books, 1970), 212.

23. James VanderKam and Peter Flint, *The Meaning of the Dead Sea Scrolls* (London: T&T Clark, 2002), 34-53.

24. Schuller, *Dead Sea Scrolls*, 39; Tov, *Textual Criticism*, 103.

25. How extensively the manuscript discoveries from Qumran and other nearby locations cover the Hebrew Bible may be observed in

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the "Index of Biblical Passages", in Eugene Ulrich, ed., *The Biblical Qumran Scrolls: Transcription and Textual Variants* (Leiden and Boston: E. J. Brill, 2010), 783-796. This index lists all the biblical passages for which there is a manuscript. The texts themselves are printed in the main body of this book.

26. Ulrich, *Biblical Qumran Scrolls*, 779-781.

27. Tov, *Textual Criticism*, 104, 106.

28. The Qumran manuscripts are identified by the cave in which they were found, the title of the work and how many copies of that work were found in the cave. Thus 1QIsa^a was found in cave 1 at Qumran, it is the book of Isaiah, and it is the first of the copies of Isaiah found in that cave.

29. A. A. Fischer dates 1QIsa^a between 125 and 100 BC, in *Der Text des Alten Testaments* (Stuttgart: Deutsche Bibelgesellschaft, 2009), 80. These dates correspond to the dates based on the shape of the letters (paleography) cited in Table 30 of VanderKam and Flint, *Dead Sea Scrolls*, 30. The same table indicates that Accelerator Mass Spectrometry readings date the scroll between 288 and 208 BC. In any event, 1QIsa^a is quite old!

30. One of the better preserved manuscripts of a proto-Masoretic type found at Qumran is 1QIsa^b, which includes segments of forty-six different chapters of Isaiah. Emanuel Tov gives the following statistics of differences between 1QIsa^b and L: omission of words: 5; addition of words: 6; different words: 7; different prepositions: 9; different grammatical forms: 24; differences in pronouns: 6; missing letters: 6; differences in consonants: 10. Across such a large amount of text, these differences are small in number. Tov concludes, "Because of the meticulous care of those who were involved in the copying of m [his symbol for the group of texts that include the later Masoretic texts], the range of the differences between the members of the m group was from the outset very small." He even quotes

with approval the conclusions of Andersen and Freeman in their analysis of 4QSam^b: "we can infer that the Massoretic system and set of spelling rules were firmly in place in all principles and particulars by the third century BCE." Tov, *Textual Criticism*, 31-32.

31. In his article, "The Dead Sea Scrolls and the Hebrew Scriptural Texts", in James H. Charlesworth, ed., *The Bible and the Dead Sea Scrolls* (Waco, TX: Baylor University Press, 2006), 1:77-99, Eugene C. Ulrich provides examples translated into English showing where some of the Qumran scrolls exhibit characteristics of the Samaritan Pentateuch and while others exhibit characteristics of the LXX.

32. Tov, *Textual Criticism*, 115-117. The citation is from p. 114.

33. Leonard J. Greenspoon, "The Dead Sea Scrolls and the Greek Bible", in Peter W. Flint and James C. VanderKam, eds., *The Dead Sea Scrolls After Fifty Years* (Leiden, Boston and Köln: E. J. Brill, 1998), 101-127.

34. Magen Broshi, "Estimating the Population of Ancient Jerusalem," *Biblical Archaeology Review* 4/2 (June 1978) 10-15. See also Hershel Shanks, *Jerusalem: An Archaeological Biography* (New York: Random House, 1995), 123; Robert K. McIver, "The Archaeology of Palestine From the Maccabees to the Second Jewish Revolt (157 BC – 135 AD)", in Mark Harding and Alana Nobbs, eds., *The Content and Setting of the Gospel Tradition* (Grand Rapids, MI: William B. Eerdmans, 2010), 1-26.

35. Both Broshi, "Population of Ancient Jerusalem", 10-15 and Shanks, *Jerusalem*, 122, suggest the population of Jerusalem in the immediate post-Exilic period to be about forty-five hundred, much less than the twenty-five thousand or so during the reign of the pre-Exilic king Hezekiah.

36. J. Barr, *Comparative Philology and the Text of the Old Testament* (Winona Lake, IN: Eisenbrauns, 1987), 1.

Chapter 3

THE WORD SPEAKS FOR ITSELF: A THEOLOGY OF SCRIPTURE

Jo Ann Davidson

Most world religions have what is called a “sacred text.” Christians affirm that for them this is the Bible, the “Holy Scriptures.” Outside Christianity, the Holy Bible is evaluated as the best spiritual literature coming from Christianity and is then equated with the writings of Buddha, the Bhagavad Gita of Hinduism or even the excellent devotional materials of Martin Luther King, Jr., or Mother Teresa.

However, the question needs to be asked: Are all “sacred texts” actually alike? Why have Christians insisted on the absolute nature of the Holy Bible? In light of contemporary critiques, the primary “textbook” of the Christian faith and its supreme authority for Christians ought to be reconsidered and reaffirmed. Few issues are of more crucial significance for Christians than the nature of God’s Word, and this is particularly relevant in the discussion of origins.

For centuries Christian thinkers have turned to this book for direction on all aspects of Christian teaching. They have constructed from its text a theology of Christ, of salvation, of mankind and of the future, to mention only some of the key concepts that identify Christian belief. But what does the Bible say about itself? What are the words of God about the Word of God? In this chapter we shall examine what this Word says when it speaks for itself.

The Word and Words of God

First of all, the fundamental assumptions and parameters within which the Bible writers worked need to be recognized. Thankfully, these are often stated explicitly in the text itself.

God’s Word in History. To begin with, none of these writers ever attempt to prove the existence of God. Without exception they all assume that he exists. The biblical prophets, along with all the authors of the different books in Scripture, claim to have real knowledge of an infinite God living, acting and speaking in their time. Although they lived and wrote centuries apart and in different cultures and languages, they are absolutely certain that God exists and that he is speaking through them when they declare “Thus says the Lord”! This stands true of all the forty different human authors of the Bible, coming as they did from a wide variety of backgrounds and occupations: kings, fishermen, shepherds, prophets, historians, a tax collector and a physician.

It would be difficult to find a more diverse collection of writers, extending from the highly educated Moses to Peter, the uneducated fisherman. Though they wrote at different periods of world history, their writings dovetail with one another intricately and brilliantly. Their books were penned

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in various countries and under differing circumstances in the different cultures of Asia, Africa and Europe. Moses wrote from a desert wilderness c. 1445 BC; Daniel wrote from Babylon beginning c. 550 BC; Paul from a dungeon in Rome (and elsewhere) and James from Jerusalem in the second half of the first century AD.

The biblical canon thus emerged over a period of some fifteen centuries, written in three different languages. During this lengthy period of time empires rose and fell without affecting the essential unity of the Bible and its message. It discusses many diverse theological matters, such as the nature of God and his purposes, the nature of man, sin and evil and God's plan of redemption, all key issues in the human drama. It would be difficult enough to get ten men to agree on so much as one single theological issue, much less forty men agreeing on many matters about which others can only speculate.¹ Thus, the Bible, the Christian "sacred text," is a collection of books written within history and addressing major issues from within a historical context.

Further, God intends that this Word be heard by every "nation, tribe, tongue and people" through to the end of human history. Vern Poythress describes the Bible as "a permanent canonical standard" to go to "the various peoples of the world," noting:

The Bible, then, is accessible in its meaning, even to those who do not have detailed knowledge of its ancient cultural settings. Not everything is perfectly understandable to everyone, and in some cases there are difficult details. . . . But because God is in charge of all cultures, we can have confidence that the important meanings are accessible across cultures.²

God's Word can be heard and understood by all people regardless of language or culture, as Jesus indicated when giving the "Great Commission" to take the gospel to "all nations" (Matt 28:20). The Bible thus speaks to real people living in a real world within the context of actual human history. History, we might say, is the backdrop against which God's Word comes forth to address the human situation.

God's Word as Predictive. What is more, the Bible testifies to a God who can and does foretell the future and that doing so is a mark of his divinity. Isaiah records the divine assurance: "Behold the former things have come to pass, and new things I declare; before they spring forth I tell you of them. . . . Indeed before the day was, I am He" (Isa 42:8-9; 43:13).³

Through predictive prophecy God discloses what is hidden from human sight and knowledge and through it reveals future realities. He announces the great time prophecies concerning the history of nations and the coming of the Messiah. Some modern minds assume God could not be so precise and suggest that the prophecies were written as after-the-fact predictions. However, this modern attitude of doubting God's ability to predict the future is never found in any of the Bible writers themselves.

Prophetic/predictive elements are found in the Old Testament (Daniel and other prophets, *e.g.*, Isa 24-27; Ezek 38-39; Joel 2-3; Jon 3:4; Zech 9-14) and New Testament (Jesus in Matt 24 and the apostles, 1 Thess 4:15-17; 2 Thess 2:3-4; Rev). Prophecies could refer to individuals and to nations. Especially significant are the prophecies concerning the Messiah, predicting that he would come and bring salvation (*e.g.*, Gen 3:15; Psalms 2; Isa 53; Zech 11:12-13).⁴ The New Testament recognizes the reality and authority of predictive prophecy, particularly with reference to its fulfillment in the person of Christ (*e.g.*, Acts 1:15-16; 2:22-36; Gal 4:4; 2 Pet 1:19-21).

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The book of Revelation is specifically called “the book of this prophecy” (Rev 22:19) and has long been widely recognized as predictive. John implies that his words are inspired by the same Spirit of prophecy that spoke in earlier ages:

He claims “the testimony of Jesus is the spirit of prophecy” (Rev 19:10). The readers of the book are expected to hear what the “Spirit says to the churches” (see Rev 2:7). While these passages are unique to the last book of the Bible, it is a clear indication that at the beginning of the Christian era, the inspiration of the prophetic oracles of the OT was believed to extend to the NT Scriptures as well.⁵

Predictive prophecy is a crucial element in the biblical message, since it directs attention to the future consummation of human history and the fulfillment of the divine purpose.

God’s Word as Prophetic. Not all biblical prophets announce future events or contribute to the canon. However, their prophetic role is still recognized as authoritative. For example, when Nathan the prophet comes to King David with the divine condemnation of David’s adultery, the king (having been inspired himself to write many psalms) does not counter or refuse Nathan’s accusing words on the basis that Nathan has not been a predictive prophet. David accepts Nathan’s sacred authority as God’s messenger and takes the rebuke in humility.

Walter Brueggemann goes so far as to say that the entire canonic text is of a prophetic nature:

Because we live so close to the biblical text, we often fail to note its generative power to summon and evoke new life. Broadly construed, the language of the biblical text is prophetic: it anticipates and summons realities that live beyond the conventions of our day-to-day, take-for-granted world. The Bible is our firm guarantee that in a world of technological naivete and ideological reductionism, prophetic construals of another world are still possible, still worth doing, still longingly received by those who live at the edge of despair, resignation, and conformity. Our preferred language is to call such speech prophetic, but we might also term it poetic. Those whom the ancient Israelites called prophets, the equally ancient Greeks called poets. The poet/prophet is a voice that shatters settled reality and evokes new possibility in the listening assembly.⁶

A prophet in this context is to be understood as one who delivers God’s message, whether or not it contains a predictive element. The prophet is God’s messenger, delivering God’s message, whether or not it is predictive. The old saying that a prophet “forthtells” as well as “foretells” may be trite but it is still true.

God’s Spoken Word. Furthermore, the Bible writers are absolutely certain that, though infinite, God can and does communicate with human beings. None ever argues that human language is any kind of barrier to direct communication from God. In fact, the message of a prophet is always considered equivalent to direct speech from God. This identification of a prophet’s words with God’s words is so strong in the Old Testament that often we read of God speaking “through” a prophet. For example, Elijah’s words in 1 Kings 21:19 are referred to in 2 Kings 9:25-26 as the oracle that “the LORD uttered . . . against him,” and Elijah is not even mentioned. And to disobey a prophet’s words was to disobey God. In Deuteronomy 18:19, the Lord speaks through Moses of a coming prophet: “If anyone does not listen to my words that the prophet speaks in my name, I myself will call him to account” (NIV).

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Old Testament prophets are consistently seen as messengers sent by God to speak his words. The repeated use of the introductory formula “thus says the Lord,” or its equivalent, clinches the full authority of a prophetic message. Indeed, throughout the Old Testament, a distinguishing characteristic of true prophets is that they do not speak their own words. God says to Jeremiah and Ezekiel: “I have put My words in your mouth” (Jer 1:9); “You shall speak My words to them” (Ezek 2:7; cf. 3:27). And those who refused to listen to a prophet were held accountable for refusing to listen to “the words of the LORD which He spoke through Jeremiah the prophet” (Jer 37:2).

The Bible writers also record numerous incidents of God speaking directly to human beings in the Old Testament, including conversations with Adam and Eve after the Fall (Gen 1:28-30; 3:9-19) and Job (Job 38-41, which is God’s longest address in Scripture, giving evidence of God listening to prior conversations and of Job afterwards understanding what God has said). The divine call of Abram (Gen 12:1-3) is the first of several conversations with the patriarch (including the lengthy conversation in Gen 18:1-23). The burning bush dialogue between God and Moses commences many years of direct communication between them (Exod 3:1-4:17). The civil code in the Pentateuch is recorded as words spoken directly by God to Moses. The interchange with Elijah at Mount Horeb (1 Kings 19:9-18) is another of many divine conversations with the prophets.

As in the Old Testament, New Testament writers know it is possible for God to speak directly to people in human language, obvious at the baptism of Jesus (Matt 3:17); the Transfiguration (Mark 9:7; Luke 9:35); the conversion of Saul (Acts 9:4); in instructions to Ananias (Acts 9:11-16); in Peter’s vision (Acts 10:13) and in the revelation to John (Rev 1:11-3:22). Jesus himself insists on numerous occasions that he speaks the words of God. For example, “the Father who sent Me has Himself given Me commandment what to say and what to speak” (John 14:10). Paul claims to have received revelation from God: “If anyone thinks that he is a prophet, or spiritual, he should acknowledge that what I am writing to you is a command of the Lord” (1 Cor 14:37-38).

Such extensive evidence strongly suggests that biblical prophets experienced something far more than a “divine encounter,” which merely implanted mysterious conviction and/or admiration for God in their hearts. God does not “encounter” human beings only with brilliant light but with actual information (Deut 29:29). In fact, he seldom appears without saying something. One person of the Triune God is even known as the “Word” (John 1:1). Jesus is not a reclusive mystic. He is in open communication with human beings. Vern Poythress observes again:

Jesus as incarnate is the truth. He is still the Word in his incarnation. When incarnate, he does not cease to be God, but continues to be God. In addition, he takes on human nature. “And the Word became flesh [human] and dwelt among us” (John 1:14). John 1:14 continues, “and we have seen his glory, glory as of the only Son from the Father, full of grace and *truth*.”⁷

The prophets and apostles do not describe how they always recognized the “Word of God” when it came, but it is clear they were certain that God had spoken. Sometimes he spoke in ways that they did not readily understand and, on occasion, even objected to, yet they never question the divine origin of the message. For example, Moses recognizes God’s voice calling him to return to Egypt, but he tries at first to refuse (Exod 4). When God instructs Jeremiah to buy a parcel of land in Israel and store the deed in a clay jar, Jeremiah recognizes the divine bidding, but he questions

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the task since a foreign army is ready to attack Israel. The exercise of buying and deeding the land seems futile, yet he obeys (Jer 31).

God's Authoritative Word. In addition to speaking directly with human beings, God also employs other supernatural methods: angels (Daniel, John); theophanies (Moses, Isaiah, Daniel, Ezekiel, Paul, John); dreams (Joseph, Pharaoh, Nebuchadnezzar); supernatural writing (Exod 31:18; Dan 5:5); a voice from heaven (Exod 19:9; Matt 3:17; 2 Pet 1:17). Through all these various means, God's revelation is not only true and consistent but remains the Word of God, an issue Poythress also addresses in emphasizing the role of God's Spirit in the communicative process:

A person who speaks in the power of the Holy Spirit is speaking not just his own mind, but also the mind of the Spirit. The Spirit as well as the human person speaks. The Spirit knows his meaning perfectly. The speech through the human author has perfect purity, because he is guided by the Spirit. The human being agrees with the Spirit, and so there is unity of meaning. But the human author remains finite and does not plumb all the depths of the implications of what he says. And so his understanding is not exactly the same as the understanding by the Holy Spirit. This is a diversity in understanding. So there is both unity and diversity in meaning when a human being speaks by the power of the Spirit. This is true for the writings of Old Testament prophets and New Testament apostles and other divinely authorized spokesmen for God.⁸

It is the activity of the Spirit in the divine-human process of communicating God's Word that gives that Word the full authority of divinity. That authority is of paramount importance to the identity of authentic Christian faith.

The Bible also warns against those who would damage or destroy its authority, such as false prophets (Deut 18:20-22; Jer 27:14-15; Matt 7:15); false apostles (2 Cor 11:12-13); false christs (Matt 24:24) and false teachers (2 Pet 2). At the present time postmodernism suggests that some traditional biblical meanings cannot be true. But in Scripture God insists that we can trust him and his Word because it *is* true. Numerous texts affirm the truth of Scripture. The psalmist declares, "The sum of Thy word is truth" (Psa 119:160, ASV). Jeremiah testifies, "In truth the LORD has sent me to you to speak all these words" (Jer 26:15, NIV); John affirms that "his testimony is true" and that he "tells the truth" (John 19:35, NIV; 21:24); Paul often insists on the truth of what he writes (Rom 9:1-2; 2 Cor 11:10), stating that he was appointed a "teacher of the Gentiles in faith and truth" (1 Tim 2:7). The gospel preached by the apostles is "the word of truth" (Eph 1:13; Col 1:5). Jesus emphatically affirms, "Thy word is truth" (John 17:17, ASV). Scripture then is the standard by which all doctrine and experience must be tested (Isa 8:20; John 17:17; 2 Tim 3:16-17; Heb 4:12). Thomas Oden is correct:

The text of Scripture itself remains normative. If we are concerned with interpreting the Bible itself, it is nevertheless not these hypothetical principles which are normative or canonical. The Bible itself remains the norm. The principles we find in it are part of our interpretation, not the object of our interpretation. They are limited by our blind-spots, and can be the means of missing aspects of the whole message of Scripture or of evading the meaning of the text itself, rather than of serving it.⁹

While this statement refers specifically to the Written Word, Scripture, the principles of normalcy and authority are equally applicable to God's spoken words, as indeed to God's word communicated through any of the means mentioned above.

The Written Word

The concept of revelation has been present in Judeo-Christian thought from earliest times. It is the process by which God reveals himself and his will to human beings. The biblical writers insist that God acts in human history and that he makes himself and his acts known. This revelatory process is a critical characteristic of Christian faith and is affirmed in both the Old Testament (*e.g.*, Deut 29:29; Isa 22:14) and in the New Testament by Christ (Matt 16:27; Luke 10:21) and Paul (1 Cor 2:10; Eph 3:3, 5). The Greek words *apokalupto* and *apokalupsis* used in these New Testament texts literally mean "uncover" or "unveil." God's purposes and his will, even God himself, are unveiled to human comprehension.

Closely connected with divine speech are numerous accounts of a prophet writing down the words of God, which are then taken as equally authoritative as the spoken Word of God. A few examples illustrate this crucial point: "The LORD said to Moses, 'Write this as a memorial in the book.' " "And Moses wrote all the words of the LORD" (Exod 17:14; 24:4); "Joshua wrote these words [statutes, ordinances and the words of the covenant renewal, v. 25] in the book of the law of God" (Josh 24:26; on Joshua as a prophet, *cf.* 1 Kings 16:34; Josh 1, 5, 16-18); "Samuel told the people the rights and duties of the kingship, and he wrote them in a book and laid it up before the LORD" (1 Sam 10:25, ESV). God specifically told the prophet Jeremiah to "write in a book all the words I have spoken to you" (Jer 30:2; *cf.* 36:2).

Perhaps the classic Old Testament instance is the writing down of the law recorded in the book of Deuteronomy and Moses' command that it should be read in the hearing of Israel in years to come. "After Moses finished writing in a book the words of this law [the book of Deuteronomy] from beginning to end" it was placed beside the ark of the covenant for future reference so that succeeding generations could "listen and learn to fear the LORD" and walk in the light of his Word (Deut 31:9-13, 24-26, NIV). In the minds of New Testament believers the Old Testament prophets, the divine penmen, whose writings already constituted Scripture in their day, were "moved" or "carried along," impelled, by the Holy Spirit (2 Pet 1:21). This written communication has long been known as "Scripture" from the Latin *scriptura* (writing) and on account of its unique nature has the same divine authority as the spoken word, as much in New Testament times as in the days of Moses, Joshua, Isaiah and all other earlier prophets.

The Authority of the Written Word. Divine revelation or inspiration is never controlled by human beings. It is not a human achievement but a divine activity. Both Testaments testify that the truth of God is not the end product of diligent human search for the divine, nor somebody's best thoughts about divine matters. It comes exclusively through God's initiative in disclosing himself. Leon Morris describes it well:

Revelation is not concerned with knowledge we once had but have forgotten for the time being. Nor does it refer to the kind of knowledge that we might attain by diligent research. It is knowledge that comes to us from outside ourselves and is beyond our own ability to discover.¹⁰

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The book of Hebrews renders the Word of God the function of God: “Sharper than any double-edged sword, it penetrates even to dividing soul and spirit, joints and marrow; it judges the thoughts and attitudes of the heart” (Heb 4:12). A prophet does not speak about God. Rather, God speaks for himself through his prophets. And human language is assumed to be capable of conveying divine communication. “God speaks in his lordship, which involves meaning, control, and presence. God himself is present in each truth.”¹¹

New Testament writers exhibit the same authority as Old Testament prophets, insisting that they speak by the Holy Spirit (1 Pet 1:10-12), to whom they credit the content of their teaching (1 Cor 2:12-13). Significantly, the same Paul who urges that believers should strive to work together peaceably often uses brazen language to defend the absolute truth of the gospel he has preached (Gal 1:6-9). Peter, noting that some people “twist” Paul’s writings “as they do the other Scriptures” (2 Pet 3:15-16), places the apostle’s writings within the parameters of Scripture already in the first century. The apostles teach with absolute authority (1 Thess 4:1-2; 2 Thess 3:6, 12 – “we command you”).

Scripture: God’s Word in Human Words. However, while the biblical writers claim to speak God’s words under the inspiration of the Spirit, the Bible does not claim that it was verbally dictated by God. The human messenger was divinely guided and given freedom in the selection of apt words to express divine revelation. The individuality of each writer is thus evident, yet the human and divine elements are virtually inseparable. Ellen White offers intriguing insights: “The Bible, with its God-given truths expressed in the language of men, presents a union of the divine and the human.”¹² She further notes that “Inspiration acts not on the man’s words or his expressions but on the man himself, who under the influence of the Holy Ghost, is imbued with thoughts. But these words receive the impress of the individual mind.”¹³ Thus, while God employs human writers, he remains the author:

Each book in the Bible had a human writer (though the writer does not always identify himself). All the books have God as divine author. And that makes the Bible a unique genre, unlike books of merely human authorship. We should take into account who God is whenever we read any book in the Bible.¹⁴

Since in this chapter we are considering what Scripture says about itself, we should note the claims of Paul in this respect. As the author of at least thirteen of the twenty-seven books of the New Testament, the revelatory process is clearly demonstrated in his experience. He states that his knowledge of Christ and the gospel came “by revelation” (Eph 3:3), a process in which God’s redemptive purposes are “revealed by the Spirit to his holy apostles and prophets” (v. 5). Yet just as clearly he begins the Epistle to the Ephesians by stating that the letter is from him to them (1:1). This epistle, as all of Paul’s epistles, is written by him as any letter of the time might have been written, yet it becomes (or remains) God’s Word. A thoughtful reading of this letter shows that Paul expected it to be received by the Ephesian believers as God’s authoritative Word, even though it was written by him. It is a fine example of God’s Word being transmitted by a human agent in human words.

The Unity of Scripture. A careful reading of the biblical text also reveals the basic continuity and unity of both Testaments. The extensive citation of Old Testament materials in the New Testament indicates that Old Testament writings were considered authoritative revelation. For example, Isaiah’s words in Isaiah 7:14 are cited as “what the Lord had spoken by the prophet” (Matt 1:22); Jesus quotes Genesis 2:24 as words that God said (Matt 19:5). In quoting “what was spoken by the

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prophet Joel" (Joel 2:28-32), Peter inserts, "says God," attributing to God the words of Joel (Acts 2:16-17). Isaiah 49:6 is quoted by Paul and Barnabas as something that "the Lord has commanded us" (Acts 13:47), contending that an Old Testament prophecy places moral obligation on them also. Paul writes that the Holy Spirit spoke through the prophet Isaiah (Acts 28:25). In Romans 9:17, he quotes God's speech in Exodus 9:16 as what "Scripture says to Pharaoh," indicating an equivalence between what Old Testament Scripture says and what God says.

Moreover, the minds of the New Testament writers are saturated with the Old Testament. They refer to it often and quote it extensively to undergird their thinking. Matthew, for example, has almost 130 quotations and allusions from the Old Testament. The four Gospels make it strikingly obvious that Jesus submits unreservedly to the Old Testament, the canon in his time. Old Testament prophecy is the pattern for his life, as he declares often that "It must be fulfilled" or "as it is written." He doesn't rebuke the Jewish theologians for studying the Old Testament but for permitting human tradition to cloud and even falsify it (Mark 7:1-13). In his teaching and ethics the Old Testament Scriptures are foundational. David Larsen is right: "Jesus knew the Word, trusted the Word, loved the Word, and used the Word. 'That it might be fulfilled' was his watchword. 'The Scripture cannot be broken' was the confidence of him for whom an argument hinged on one word of Scripture (John 10:35)."¹⁵

Jesus expects the Old Testament to be accepted as authoritative. He refers to events in Creation week and persons in the Old Testament as historical (Mark 10:6; Luke 4:27). Often he inquires, "Have you not read what David did?" or "Have you not read in the law?" (Matt 12:3-5). When questioned on the issue of divorce, he answers, "Have you not read?" (Matt 19:4). His response to those upset by children praising loudly in the temple is, "Have you never read?" (Matt 21:16). Once, when his authority is being questioned, Jesus tells a parable, concluding with the question, "And have you not read this Scripture?" (Mark 12:10). In response to a lawyer's question about salvation, Jesus asks, "What is written in the law? What is your reading?" (Luke 10:26). The lawyer answers with a direct quotation from the Ten Commandments, and Jesus declares, "You have answered right." Asked about last-day events on the Mount of Olives, Jesus urges his questioners to study Daniel (Matt 24:15). If one accepts the biblical record concerning Christ, there can be no cavalier dismissal of his absolute endorsement of the Old Testament, including its historical accounts.

The apostle Paul continues this pattern of referring to the Old Testament and insisting on its authority. For example, in his letter to the Romans he makes a powerful argument for the gospel built upon the Old Testament and, in the process, demonstrates the paramount principle of listening to what Scripture says about itself. The intertextual linkages of later biblical writers with earlier ones are striking. Gerhard Maier is correct:

The statement "Holy Scripture is its own interpreter" [Martin Luther] would be senseless if it were not assumed that Scripture possessed priority over the human interpreter. Revelation forms the interpreter's consciousness, thinking, and willing: he does not understand revelation on the basis of his consciousness, thinking, and willing. Revelation makes itself understandable to the interpreter.¹⁶

The Totality of Scripture. While it is sometimes argued that the truthfulness of the Bible does not necessarily include its historical details, especially the first eleven chapters of Genesis, we find

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Jesus and the New Testament authors accepting the historicity of the Old Testament. In fact, the New Testament writers use the historical events of the Old Testament to undergird the certainty of future actions of God. The creation of the world, the Flood and Israel's exodus from Egypt are vouched for as literal events and critical for understanding the ways of God. Wayne Grudem insists:

Perhaps it has not been stated emphatically enough that *nowhere* in the Old Testament or in the New Testament does any writer give *any* hint of a tendency to distrust or consider slightly unreliable any other part of Scripture. Hundreds of texts encourage God's people to trust Scripture completely, but no text encourages any doubt or even slight mistrust of Scripture.¹⁷

The Bible is a "system of truth"¹⁸ self-authenticated in an impressively extensive manner. Paul witnesses to this by insisting that *all* Scripture has been "given by inspiration of God."¹⁹ He doesn't allow for differentiation among the various books or sections of the Old Testament writings (2 Tim 3:16). David Dockery correctly advises: "We must resist relating divine inspiration merely to content and not to form, to the Bible's purpose and not to its essence, or to its thoughts and not to its words. The entirety of Scripture is inspired."²⁰

Today some suggest that various parts of Scripture are of questionable value. No modern writer addresses this issue more directly than Ellen White. She states emphatically:

What man is there that dares to take that Bible and say this part is inspired and that part is not inspired? . . . *Never let mortal man sit in judgment upon the Word of God or pass sentence as to how much of this is inspired and how much is not inspired, and that this is more inspired than some other portions.* God warns him off that ground. . . . We call on you to take your Bible, but do not put a sacrilegious hand upon it, and say, "That is not inspired," simply because somebody else has said so. Not a jot or tittle is ever to be taken from that Word. Hands off, brethren! Do not touch the ark.²¹

Jesus himself speaks with certainty on this matter. When confronted by Satan in the wilderness of temptation Jesus relied on the Word of God. Not only did he respond to temptation three times by declaring specifically "It is written" and citing Scripture on each occasion, but he began his defense against Satan by stating that "every word" that comes from God is valuable and necessary (Matt 4:1-10). With reference to Christ's response to the first temptation as recorded in Matthew 4:4, Leon Morris states:

Every word is comprehensive: Jesus is not suggesting that parts of Scripture may safely be neglected, but affirming that it is profitable in its entirety. The reason is apparent in the words *that goes [sic] out through God's mouth*. Jesus views God as the author of Scripture, and because of this it must be heeded carefully. . . . We should not overlook the fact that, while Jesus was tempted to do something quite beyond our ability, he does not cite a text that applies to the Messiah alone; what he quotes is valid for the whole race.²²

It is the conviction that the sixty-six individual books of the Bible are in fact one book, speaking with one voice, the voice of God, which is the foundation of Protestant Christianity and historic Christian orthodoxy. This conviction came about as men and women studied the words of Scripture for themselves and discovered what God's Word said about itself.

In Conclusion

The faith of Christians in the Word of God is not misplaced. We rightfully accept the biblical writers' firm stand on the truthfulness of the Bible including its historical records and account of human origins and future. With this inspired and authoritative record we can be confident of salvation and the promised eternal home, for the Creator is the Redeemer (Col 1:13-22) and he assures us that the way he has acted in the past is the measure of how he will act in the future. Grant Osborne states, "The Bible has an inherent sense of authority, seen in the constant use of 'Yahweh says' in the Old Testament and the aura of divinely bestowed apostolic authority in the New Testament writers."²³

Psalms 119 is a lengthy meditation on the Word of God. We are to seek it (v. 45), choose it amid many options (vv. 30, 173). We are to long for it, love it and delight in it (vv. 40, 97, 113, 143). We are to hide it in our hearts and remember it (vv. 11, 52). The Word of God was fire in Jeremiah's bones (Jer 20:9) and the seed of Isaiah's proclamation (Isa 55:10-11). It can be an inexhaustible treasure for the child of God, wealth beyond any human securities. God's "testimonies are wonderful!" (Psa 119:129).

The Bible is indeed a "sacred text," but in a category all its own. Its claims are far reaching and absolute. Within its pages, one encounters the Infinite God. At a time when theology is often reduced to "spirituality" and existential experience, the critical issues remain – the authorship and ultimate authority of Scripture. Fleming Rutledge expresses my sentiments eloquently:

Every time I think I am losing my faith, the Biblical story seizes me yet again with a life all its own. No other religious document has this power. I remain convinced in spite of all the arguments that God really does inhabit this text. . . . The God we proclaim to you today is not the "vague abstraction" of the philosophers or the "insubstantial shadow" of the New Agers. . . . He is the living God.²⁴

In his important book *I Believe in Revelation* Leon Morris reminds us of just how important acceptance of God's revealed Word and its claims really is. "There are some things that make Christianity Christianity," he says, and then concludes:

Do away with them and you have a new religion. It is easier to be sympathetic to men who recognize this and dedicate themselves to the overthrow of Christianity . . . than to those who jettison the Christian distinctives while maintaining that they hold the Christian faith.²⁵

And with reference to the Bible's own claim to be a revelation from God, Morris also states, "All this must be taken with the utmost seriousness."²⁶

And that is the point of this chapter. We must take seriously what the Bible says about itself – its claims to inspiration, revelation and authority. In all matters of faith, doctrine and lifestyle the Word must be allowed to speak for itself and then be given priority for what it is – the revealed Word of God, the foundation of true Christianity.

NOTES AND REFERENCES

1. Adapted from Erwin W. Lutzer, *Seven Reasons Why You Can Trust the Bible* (Chicago, IL: Moody Press, 1998), 45-46.
2. Vern S. Poythress, *In the Beginning Was the Word: Language—A God-Centered Approach* (Wheaton, IL: Crossway, 2009), 190. Fernando Canale enlarges on the same point: "Whenever we read a text, we correctly assume that someone has written it. We do not always need to know the author of a text to understand its meaning, but such knowledge may add depth to the meaning. The same dynamic takes place when we read Scripture. Most of the time we understand the face-value meaning of texts. If we are convinced that God is the author of what we read in Scripture, our theological understanding of it will differ considerably from a reader who is persuaded that Scripture was written by well-intentioned persons describing their own experiences.... Our understanding of Revelation-Inspiration becomes a necessary assumption for our hermeneutics of Scripture and its theology." Fernando Canale, "Revelation and Inspiration", in George W. Reid, ed., *Understanding Scripture: An Adventist Approach*, Biblical Research Institute Studies, vol. 1 (Silver Spring, MD: Biblical Research Institute, 2006), 47-48.
3. Most of the quoted texts in this chapter are from the New King James Version.
4. Ellen White testifies: "Christ as manifested to the patriarchs, as symbolized in the sacrificial service, as portrayed in the law, and as revealed by the prophets, is the riches of the Old Testament. Christ in His life, His death, and His resurrection, Christ as He is manifested by the Holy Spirit, is the treasure of the New Testament. Our Saviour, the outshining of the Father's glory, is both the Old and the New.... The Old Testament sheds light upon the New, and the New upon the Old. Each is a revelation of the glory of God in Christ. Both present truths that will continually reveal new depths of meaning to the earnest seeker." *The Faith I Live By* (Washington, DC: Review and Herald, 1958), 12.
5. Daniel L. Akin, *A Theology for the Church* (Nashville, TN: B & H Publishing Group, 2007), 169.
6. Walter Brueggemann, *Finally Comes the Poet: Daring Speech for Proclamation* (Minneapolis: Fortress, 1989), 4.
7. Poythress, *In The Beginning*, 290.
8. *Ibid.*, 166. He also argues: "God designed language to allow communication between himself and man, even in the situation where man is dull, or is resisting the truth. Having multiple means of communication is one way of overcoming dullness," 191.
9. Thomas C. Oden, *Life in the Spirit: Systematic Theology*, vol. 3 (New York: HarperSanFrancisco, 1992), 360.
10. Leon Morris, *I Believe in Revelation* (London: Hodder and Stoughton, 1976), 10.
11. Poythress, *In The Beginning*, 293.
12. Ellen G. White, *The Great Controversy* (Mountain View, CA: Pacific Press, 1911), vi.
13. Ellen G. White, *Selected Messages*, vol. 1 (Washington, DC: Review and Herald, 1958), 21.
14. Poythress, *In The Beginning*, 188.
15. David L. Larsen, *Biblical Spirituality: Discovering the Real Connection Between the Bible and Life* (Grand Rapids, MI: Kregel, 2001), 15.
16. Gerhard Maier, *Biblical Hermeneutics* (Wheaton, IL: Crossway, 1994), 33.
17. Wayne A. Grudem, "Scripture's Self-Attestation and the Problem of Formulating a Doctrine of Scripture", in D. A. Carson and John D. Woodbridge, eds., *Scripture and Truth* (Grand Rapids, MI: Baker Books, 1992), 58-59 (emphasis Grudem's).
18. Ellen White speaks eloquently of the Bible's "system of truth": "The Bible contains all the principles that men need to understand in order to be fitted either for this life or for the life to come. And these principles may be understood by all. No one with a spirit to appreciate its teaching can read a single passage from the Bible without gaining from it some helpful thought. But the most valuable teaching of the Bible is not to be gained by occasional or disconnected study. *Its great system of truth* is not so presented as to be discerned by the hasty or careless reader. Many of its treasures lie far beneath the surface, and can be obtained only by diligent research and continuous effort. The truths that go to make up the great whole must be searched out and gathered up, 'here a little, and there a little.' Isaiah 28:10." Ellen G. White, *Education* (Mountain View, CA: Pacific Press, 1952), 123-124 (emphasis added).
19. The original language conveys the meaning "God-breathed."
20. David S. Dockery, *Christian Scripture: An Evangelical Perspective on Inspiration, Authority and Interpretation* (Nashville, TN: Broadman and Holman, 1995), 40.
21. Ellen G. White, "Ellen G. White Comments," in *The Seventh-day Adventist Bible Commentary*, vol. 7 (1957), 919-920 (emphasis added). Her language is always emphatic on this topic.
22. Leon Morris, *The Gospel According to Matthew* (Grand Rapids, MI: William B. Eerdmans, 1992), 74.
23. Grant R. Osborne, *The Hermeneutical Spiral: A Comprehensive Introduction to Biblical Interpretation* (Downers Grove, IL: InterVarsity Press, 2006), 25, 28.
24. Fleming Rutledge, *Help My Unbelief* (Grand Rapids, MI: William B. Eerdmans, 2000), 25.
25. Morris, *Revelation*, 74-75.
26. *Ibid.*, 21.

Chapter 4

GENESIS: INTRODUCTION TO THE CANON AND TO BIBLICAL THEOLOGY

H. Ross Cole

It is a well-known fact that the Bible is not actually a single book, but a library of many different literary pieces, written by a variety of different authors under a variety of different circumstances over a period of more than a millennium and a half. Yet in the midst of this diversity believers assert a deep unity, which even in the case of Genesis itself is today being reaffirmed by many biblical scholars.¹

The logical place to begin then is at the beginning. A synonym for the word “genesis” is “origin.”² So it seems right that a book called “Genesis” should come first in the canon of Scripture. However, Genesis provides much more than a chronological starting point. In a profound sense, it introduces the story and theology of Scripture as a whole. Indeed, without the orientation it provides, there are important parts of the rest so subtle in their expression that we might overlook them altogether. These assertions especially apply to the so-called primeval history of Genesis 1-11, ironically the portion of the book that to most modern and postmodern readers alike seems the most fantastic and the least historical of all.

This chapter notes eleven vital orienting themes in Genesis, especially in chapters 1-11:

- The Oneness of the Sovereign God
- The Goodness of Creation
- The Reality of Cosmic Conflict
- The Sinfulness of Humanity
- The Balance of Work and Rest
- Marriage and the Blessing of a “Helper”
- The Conditionality of Life
- The Status of the Remnant
- Redemption as a New Creation
- The Coming Messiah
- The Response of Faith

The Oneness of the Sovereign God

In the ancient Babylonian creation account known as the *Enuma Elish*, gods themselves are the product of creation, and are in turn agents of further acts of creation. In the Genesis account God alone is God, and is identified as such by his creative acts. Throughout the Old Testament the active forms of the Hebrew verb *br'* always have the Deity as their subject. The dividing line between the Creator and the created is absolute. As agents of the divine, created objects are ascribed no divine status, not even of an honorary kind. Sun and moon are not even named in Genesis 1, lest in written translation into Babylonian or Egyptian the symbol of divinity be attached to them as a necessary part of customary spelling. They are simply called “lights”³ (v. 16). Light itself is described as being created three days earlier, lest anyone or anything other than God himself be seen as the source of light. Stars do not ordain human destiny. Their creation is almost an afterthought to that of the two great light-bearers. Sea monsters are not gods to be defeated, but the mere playthings of the one true God. Human beings alone are said to be created in the image of God, but this assertion does not mean that they are God. When they cross the boundary to become like God/gods, a tragic ungodlike expulsion from the Garden is what follows, not exaltation to divine status.⁴

Is there any suggestion of the Christian doctrine of the Trinity here? None that is overt. However, the plural cohortative of Genesis 1:26 is tantalizing:⁵ “Let *us* make man in *our image*.”⁶ One thing is clear. The New Testament asserts that Jesus is the agent of creation against the background of the Genesis declaration of creation as a divine act (*e.g.*, John 1:1-3; Col 1:15-18; Heb 1:2, 10-12). In so doing, it ascribes him full divinity – “in him dwells all the fullness of the Godhead” (Col 2:9). The very least that can be said is that he is seen as the visible manifestation of the transcendent Genesis Creator.

The Goodness of Creation

In Genesis 1:4 God sees that the light is good. He sees the separation of the land from the seas as good in verse 10, the creation of vegetation as good in verse 12, the arrangement of the lights as good in verse 18, the creation of air and sea creatures as good in verse 21 and the creation of land creatures as good in verse 25. Human beings are then created, and God sees all that he had made as very good in verse 31. The blessing of fruitfulness is announced upon animals in verse 22 before it is announced upon human beings in verse 28. There is no suggestion here that God is interested only in “spiritual” realities, or even especially in them. He is interested in everything, in the totality of creation. The Black Death wiped out up to half the European population in the thirteenth century, and can be ascribed in large part to an utter absorption in the spiritual at the expense of the physical.⁷ To see nature as an independent entity in which God takes an interest only once humans appear is equally fallacious. The words “environs” and “environment” relate to surroundings or neighborhoods. “Environmentalism” therefore does not adequately capture the concern of these verses.⁸ The created order does not have value simply because it provides the context for human life. It has a value of its own quite apart from human beings. Losses in the created order are intrinsic tragedies. The tragedy they bring to human beings is only part of the picture.

Human beings are given rulership over other living creatures and the authority to subdue them (Gen 1:26-28).⁹ However, this authority is only delegated in the image of God. It is neither absolute nor independent. Adam is placed in the Garden to serve (Gen 2:15).¹⁰ Adam is a scientist before he is a husband, Yahweh God bringing the animals before him and seeming to wait with bated breath

for what Adam will call them. So Adam does for the animals what God earlier does for the light and darkness (Gen 1:5) and the expanse of the heavens (v. 8). Is this just a matter of classification, or is Adam even assigning their function in the created order?¹¹ There is no angel here whispering the correct name in Adam's ear, as in the Qur'an.¹² Later when the destruction of all living things comes before Yahweh, Noah illustrates an ideal of what is involved in the human rulership over the animals by bringing pairs and sevens of the different kinds of animals into the ark (Gen 6:19-20; 7:2). He thus becomes the first conservationist. After the Flood, God gives permission for the first time for humans to eat animals, but prohibits the eating of blood, out of regard for the sanctity of life (Gen 9:3, 4).¹³

The Reality of Cosmic Conflict

Satan and demonic powers are mentioned little throughout much of the Old Testament. Belief in the existence of such beings has sometimes been seen as a late development in Jewish thinking. However, "the notion of an opposing voice represents a challenge to belief in a sovereign God. The wonder, therefore, is not that the Bible says so little about the opposing power but that it says so much."¹⁴ The issue is therefore one of repression rather than destruction.¹⁵ The serpent is fully identified as Satan and the devil in Revelation 12:9 (cf. 20:2). It might seem anachronistic simply to read this understanding back into Genesis 3. Nevertheless the question arises even here, as to whether there is a power behind the serpent, albeit one ultimately as creaturely as he is. The Old Testament scholar John Sailhamer perceptively comments:

Though the "enmity" may lie between the two "seeds," the goal of the final crushing blow is not the "seed" of the snake but rather the snake itself; *his* head will be crushed. In other words, it appears that the author seems intent on treating the snake and his "seed" together, as one. What happens to the snake's "seed" in the distant future can be said to happen to the snake as well. This suggests that the author views the snake in terms that extend beyond this particular snake of the garden. The snake, for the author, is representative of someone or something else.¹⁶

In Genesis 3 there is plainly a personal power at enmity with the divine, and his tools of trade range from deliberate exaggeration ("Has God said that you can't eat of any tree of the Garden?"), to outright lies ("You certainly won't die"), to statements that are technically true, but have the wrong meaning in its mouth ("Your eyes will be opened," but in shame not delight; you will know "good and evil," but in the sense of knowing blessing and curse, not in the sense of knowing everything).¹⁷ The temptation in the Garden is clearly part of a larger if as yet untold tale.

The Sinfulness of Humanity

"Behold I have found only this, that God made men upright but they have sought out many devices" (Eccl 7:29). The Fall in the Garden has catastrophe written all over it, and the first couple are consequently expelled from their land, as Israel will later be from its land. Yet things do not improve. If the first sin is stealing fruit (Gen 3), the second is fratricide (Gen 4:1-15) and soon bringing down vengeance for murder is something to be delighted in (vv. 23-24). In short order the whole earth is filled with violence, to the extent that God himself is caught by surprise at the

depth and persistence of human rebellion – or so it appears, if one takes the words of Genesis 6:11 literally, “The LORD was sorry that He had made man on the earth, and He was grieved in his heart.” The promise “never again to curse the ground on account of man” (Gen 8:21) appears to be based on a divine resignation to how inveterately evil human devising has become, rather than on compassion *per se*. As if to prove the point, Noah, it is stressed, is “a righteous man, blameless in his time” (Gen 6:9). However, even he ends up drunk (Gen 9:21 – a folly of wrongly chosen fruit once more), with a curse descending upon his grandson Canaan (v. 25) and the whole world soon in rebellion again (Gen 11).

The situation is no better in the later chapters of Genesis. Twice Abraham lies about his relationship to Sarah and leaves her in the harem of another man (Gen 12:10-20; 20), an example followed by his son Isaac with Rebekah (Gen 26:1-16). Rebekah and Jacob deceive Isaac so that he will bless Jacob instead of Esau (Gen 27:5-29), Laban gives Jacob Leah as a wife instead of Rachel (Gen 29:14-30) and cheats him by changing his wages ten times (Gen 31:7). In turn, Jacob deceives Laban when he runs away from him (v. 20) and Rachel deceives him by stealing the household gods (vv. 19, 34-35), as if the family of promise should treasure graven images anyway! In the next generation, Tamar plays the prostitute to trick Judah into giving her a son (Gen 38) and Jacob’s sons trick their father into believing that a wild animal has killed Joseph (Gen 37:20-23).

Deceit is far from the only sin in Abraham’s family or in the lives of his descendents. The way these brothers treat Joseph is, of course, a terrible tale of betrayal all on its own (Gen 37). Lot’s daughters seduce their father with wine to ensure a progeny (Gen 19:30-38), Tamar knows how easily Judah will fall to the charms of a whore (Gen 38), and Simeon and Levi slaughter the Shechemites *en masse* (Gen 34). As for people outside Abraham’s family, Sodom and Gomorrah are wiped out on account of their wickedness and depravity (Gen 19:1-29) and like the Flood become types of the end of the age (*e.g.*, Luke 17:28-30). In Genesis, the Amorites have not yet filled their cup of iniquity, but there is no doubt that fill it they will (Gen 15:16).

The perplexities of the battle with sin and the deeply embedded tendencies to sin in human nature described so graphically in Romans 7 are writ large from the beginning. The underlying message of Genesis is clear – no solution to the human predicament lies in human beings themselves!¹⁸

The Balance of Work and Rest

In Genesis, work is clearly presented as a blessing, even in the unfallen state. It is then that humans are commanded to rule over other living creatures and to subdue them (Gen 1:26-28) and Adam is placed in the Garden to serve (Gen 2:15). However, from the beginning there is provision for rest as well. Human beings do their work “in the image of God.” If all we had was the Creation account, it would have to be said that the main thing we know about God is that he works and rests in a weekly cycle of darkness and light. It would therefore appear to be a fundamental aspect of our humanity that we work and rest in the same cycle.¹⁹

It is noteworthy that there appears to be no limitation to the divine power that would require God to take a whole week over creation, nor any exhaustion on his part that he would need to stop to recover his energies at the end of that week. Both the attenuation of time over work and the ceasing of work to rest when it is over appear to be for the sake of humankind, in contrast to the situation in the *Enuma Elish*, where humans are created for no other reason than to give the gods rest. The idea of God taking six days to create the world and then resting,

reveals the kind of anthropomorphism which all too often aggravates biblical parlance about God. . . . [The prohibition against idolatry] forcibly reminded even the most earthy Jew of the non-material nature of the true God. But if God was so different from anything material, what could be the reason for the emphatic assertion that He ceased from His work of six by takings by taking a rest on the seventh? . . . Clearly one is faced here with a divine role model set for man.²⁰

From the beginning we are thus reminded of how indebted we are to grace in what God has done for us, before we ever do anything for him.

To remove the sanctification of the seventh day to eons after the creation is to truncate the story and to deprive it of its goal. Genesis 2:1-3 is a tightly knit unit in its own right, “a unified composition which does not let the reader bracket out any traditions within it with any degree of certainty.”²¹ All the blessings in Genesis 1 clearly have creation and humanity in view and become operative at the moment that blessing is made.

It is thus “with respect to his creation and with respect to man in particular that God blessed the Sabbath day.”²² The last section of each successive genealogy in Genesis is always “the one which announces the following history,” and thus the divine Sabbath observance clearly begins “the new history, the human one.”²³ The Sabbath blessing is thus operative from the first seventh day onwards.²⁴

It is true that no direct command is given to humans in Genesis 2:1-3 to observe the Sabbath, but since human beings are created in the image of God, one is hardly necessary. His humble example of relationship to the creation is enough. The sanctification of the day further implies a public proclamation of its holiness. In the Old Testament, the sanctification of time is always either estimative, referring to the actual observance of a holy time,²⁵ or declarative, emphasizing a public announcement.²⁶ In Genesis 2:3, the estimative use can be ruled out, since God did not sanctify the seventh day by stopping on it; instead he sanctified it because he then stopped his work. The use is therefore declarative, with an emphasis on the public proclamation of the sanctity of the seventh day at the time of creation.²⁷

If it were not for Genesis 2:1-3, it might be easy to dismiss the Sabbath as a distinctively Jewish identity marker, with no relevance to wider humanity; or as a shadow of salvation from sin, like the sacrificial system. As it is, Genesis paints it as a universal blessing before the advent of either Jew or sin. William Paley, famous for his theistic arguments from design, ably put the case for the ongoing significance of Creation ordinances, much and all as he believed the Sabbath was only instituted at the Exodus. “If the Divine command was actually delivered at the creation, it was addressed, no doubt, to the whole human species alike, and continues, unless repealed by some subsequent revelation, binding upon all who come to the knowledge of it.”²⁸

The significance of the theme of rest does not decrease with the entrance of sin; it increases with the curse that comes upon the land (Gen 3:17-19). Lamech accordingly names his son Noah (meaning “comfort” or “rest”) because he will bring comfort or rest for all this toil (Gen 5:29). When the ark lands, the same root is used to say it comes “to rest” on the mountains of Ararat (Gen 8:4). The promise of land is thus not only about an opportunity to work, it also comes to stand for rest, to the point that not to enter the land is not to enter the divine rest (Psa 95:11). Yet just being in the land does not equate with entering into the rest either (vv. 7-10), a fact picked up by the New Testament

to point to the eschatological rest as the true fulfillment of the promise of land (Heb 4:6-8), of which the Creation Sabbath becomes an anticipation (vv. 3-4).

Marriage and the Blessing of a “Helper”

“It is not good for the man to be alone,” so Yahweh God therefore makes a woman, “a helper suitable for him” (Gen 2:18), or “comparable to him” (NKJV), or better still “a power equal to him.”²⁹ The Genesis paradigm for male-female relationships hardly seems to match at all the values of the patriarchal culture through which the story has come to us. “For this reason a man will leave his father and mother and be united to his wife” (v. 24). However, in ancient Israel it was women who left and the men who stayed. Yet herein we see the power of stories that transcend their setting to sow the seeds of change. Marriage will be the appropriate state of life for most human beings. Singleness will be the situation for some, as was the case later in the Bible – Jeremiah, Jesus and Paul (at least during his apostleship). But under normal circumstance is it not good for humans to be alone.

When Matthew reports Jesus’ position on divorce, he has him go back before the provisions of Moses on the subject to the original creation, citing Genesis 1:27 and 2:24, to the effect that what God has joined together humans should not put asunder (Matt 19:3-9). The original creation presents a view of marriage as monogamous, heterosexual, permanent and reproductive, necessary for the fulfillment of the original divine intention for humans to populate the earth.

On a fallen planet, ideals are not always met. In the ancient world, the element of reproduction is especially brought to the fore. The more children a young man has, the happier he is considered to be (*e.g.*, see Psa 129:5). In Genesis, both Abraham and Jacob so idealize fertility that they add concubines to insure it comes to pass (Gen 16; 30), but these attempts do not bring happiness. So today we must set our ideals according to the creation record, but remember the reality in which we live.

The Conditionality of Life

In line with the Genesis emphasis on the goodness of creation, there is no hint of an incorporeal human existence before the creation. To the mind of the writer, “incorporeal” and “human” would be oxymoronic. It is only when Yahweh God breathes the breath of life into the nostrils of the newly formed man that he becomes “a living being” (Gen 2:7). At death human beings do not enter a higher state of being. Creation is instead reversed, they return to the dust, and they become (for the time) as though they had not been (Gen 3:20). The expulsion from the Garden is precisely to insure that humans in their sinfulness do not take from the tree of life and live forever. To claim that death is anything other than death is to repeat the serpent’s lie (v. 4). The genealogies throughout Genesis confirm like a drumroll the reality of death, even when life is long.³⁰

In line with the teaching of Genesis, elsewhere in the Old Testament it is not the dead who praise God, but the living (*e.g.*, Isa 38:18-19) for the dead “know nothing” and all their emotions have “perished” (Eccl 9:5-6). From the added New Testament perspective, God alone possesses immortality (1 Tim 6:16) and it is only through the gospel that life and immortality are brought to light through Christ who has abolished death (2 Tim 1:10). And that life is found not in death itself, but in resurrection from the dead. If there is no resurrection from the dead, then we have hope only

in this life (1 Cor 15:12-19, 32). The New Testament scholar N. T. Wright speaking specifically of 1 Corinthians 15 and the Christian hope of resurrection states, “The whole chapter echoes and alludes to Genesis 1-3. It is a theology of new creation.”³¹ It is a clear example of the opening chapters of Genesis being seminal to biblical theology in its fullness.

The Status of the Remnant

Enmity is placed between the seed of the women and the seed of the serpent as a whole (Gen 3:15), yet there is a narrowing interest in a particular seed throughout Genesis. Cain’s line is vanquished and Seth’s line replaces it. Only Noah and his family survive the flood. Canaan is early removed from particular focus (Gen 9:25). Abraham becomes the person of special focus (Gen 12:1-3). Yet in a point Paul delights to emphasize, Ishmael is not the child of promise, and Jacob inherits the birthright above Esau (Rom 9). In a process of time and in language anticipating Revelation 12:17, the focus is always on a remnant of the woman’s seed. Indeed, the root of the Hebrew verb used in Genesis 7:23, “and only Noah *was left*,” is identical to that of a nominal form often translated (*šʾr*) as “remnant” throughout the Old Testament.³²

Reading the story of Genesis, a picture readily emerges of “remnants” who appear concerned primarily for their own existence and little more. Do Pharaoh or Abimelech feel blessed by their encounter with Abraham, or does Hagar for that matter, at least in the short term? Simeon and Levi’s slaughter of the Shechemites make Jacob “odious among the inhabitants of the land” (Gen 34:30). Joseph saves the Egyptians from famine (Gen 41), but they lose their land to Pharaoh in the process (Gen 47:20-25). Yet in Yahweh’s call to Abram it is promised that he “shall be a blessing” (Gen 12:2), and that in him “all the families of the earth shall be blessed” (v. 3). The tension between this introduction and what follows is profound. However, it might scarcely be noted if it were not for the extended introduction to the story of Abraham’s family provided by Genesis 1-11. Abram/Abraham’s story is a divinely initiated counterbalance to what had threatened to be a global catastrophe and does not reach its ultimate fulfillment until reinterpreted in the New Testament.

So it ever is when God works with the particular. The selection of the particular is never an end in itself. It is always intended as a channel of blessing on a wider, even global scale. So the idea of a remnant soon becomes apparent in Genesis, and may even have been in Jesus’ mind when he spoke of “few” ultimately being chosen (e.g., Matt 22:14).

Redemption as a New Creation

Within Genesis 1-11, the Fall and Creation together provide a powerful framework for depicting future judgment and restoration. The temptation account of Genesis 3:1-6 becomes a prelude to the Pentateuch and Israel’s history as a whole.³³ The Flood is a reversal of Creation, with the boundaries set on the second day between the waters above and the waters below now obliterated, and the separation between land and sea established on the third day now nullified. Even though the passage of time is still marked, the distinction between day and night established on the first day is surely profoundly obscured by the storm clouds. Then the windows of heaven close again, the fountains of the deep dry up, dry land re-emerges and Creation ordinances are reiterated for the new creation (Gen 9:1-7). The stage is set for the depiction of the Exodus as a new creation, with a pillar of

cloud regulating day and night and dry land emerging from the Red Sea. The Exile is a return to the formlessness and emptiness of the original creation (*cf.* Gen 1:2; Jer 4:30),³⁴ and the return a second Exodus. John depicts redemption as a new creation, opening with same words as Genesis, “In the beginning” (John 1:1), speaking early of “the light that shines in the darkness” (v. 5), and recounting later the cry of a completed work, “It is finished” (John 19:30).

Without the grounding provided by the Creation and Flood accounts it might be easy to think of events along the way of the biblical narrative as random and disconnected. However, in the light of the Genesis record, the Exodus, Exile and restoration become preludes to paradise restored. The goal of salvation is not simply the restoration of *those* who are lost – it is the restoration of *all* that has been lost through sin. The Hebrew for “beginning” in Genesis 1:1 does not simply suggest the first in a series. It denotes a beginning as opposed to an end.³⁵ The end, or the new beginning, is not finally here until the tree of life is once again established among human beings (Rev 22:2).³⁶

The Coming Messiah

In Genesis 3:15 the Lord God promises to put enmity between the serpent and the woman, and between his seed and her seed. Seed here no doubt ultimately represents their descendants as a whole. However, the seed of the woman is not said to defeat the seed of the serpent *per se*. It is the head of the serpent himself that the seed of the woman will crush. The suggestion is that of a personal one-on-one conflict, embodying the wider, more inclusive encounter. A particular Messianic and unmistakably male individual appears to be in view here.³⁷ The fulfillment of his mission will involve personal loss and pain (“you shall bruise his heel,” Gen 3:15), yet it will be a victorious mission (“He shall bruise you on the head,” v. 15). Messianic hope is already well under way in the opening chapters of Genesis.

Messianic hope also appears to be writ large in Genesis 49:10, where it is promised that the scepter (the symbol of kingship) will remain in Judah “until Shiloh comes,” or as the NIV translates, “until he comes to whom it [tribute] belongs.” The future appearance of a specific male ruler (a Messiah?) is again in focus. Verse 11 then stresses his wealth: “He will tether his donkey to a vine, his colt to the choicest branch; he will wash his garments in wine, his robes in the blood of grapes,” and verse 12 his attractiveness: “His eyes will be darker than wine, his teeth whiter than milk.”

Commenting on verse 11 Victor Hamilton says:

Tethering an ass to a vine (which the ass would readily consume) would be like lighting a cigarette with a dollar bill. Laundering one’s clothing with wine might also point to opulence.

It is clear that *wine* is not exactly the same as *grapes’ blood*. The first refers to the finished product. The second refers to the crushing of the grapes. May we have here a pastoral image, but within which there is the intimation of violence? . . . To his own this one will bring joy and fullness; to those who reject him he brings terror.³⁸

Derek Kidner, author of the Genesis volume in the Tyndale Old Testament Commentary series, points to the caution that he thinks should be exercised in finding a Messiah in verse 10 alone, although at the same time noting “the Messianic content which Jewish and Christian exegesis has found in the saying from earliest times.” But all that changes in the light of verses 11 and 12:

Every line of these verses speaks of exuberance, intoxicating abundance: it is the golden age of the Coming One, whose universal rule was glimpsed in [verse] 10c. . . . In its own material terms it bids adieu to the pinched regime of thorns and sweat for “the shout of them that triumph, the song of them that feast.” Jesus announced the age to come in just this imagery in his first sign at “Cana” of Galilee.³⁹

The Response of Faith

“And he [Abram] believed in the LORD; and He accounted it to him for righteousness” (Gen 15:6, NKJV). Genesis portrays a wide-ranging picture of the scope of the divine intention for humanity. Paul will later describe Abraham’s faith as unwavering (Rom 4:20). Given the fluctuations in Abraham’s life, such an assertion can only reflect how faith is indeed counted for something more than its obvious meaning implies. One source describes Genesis 15:6, as “the oldest and most profound definition of faith.”⁴⁰ Paul would later build on it to articulate the defining doctrine of New Testament theology: justification or righteousness by faith.

Paul elsewhere suggests that Ishmael was the product of human works and that Isaac was the product of faith (Gal 4:21-31). A study of Genesis in its own context suggests that Paul has read Genesis in a way that the author of Genesis would have been profoundly comfortable. Announcements of plot in Genesis are not matched by straightforward fulfillment. God blesses the first pair (Gen 1:26-28) yet they end up in exile. As we have already noted, Abram and his seed will be a blessing to other nations, yet too often they turn out to be a curse, or at best a mixed blessing. Abram is promised seed and land (Gen 12), but it is decades before Isaac is born and the only part of Canaan he owns at the end of his life is the tomb he has purchased for Sarah. Similar situations arise as patriarchal history unfolds. Indeed, Genesis may be read as a sequence of unfulfilled divine promises waiting to be fulfilled in the future and calling for the continued exercise of faith in the present.

Ishmael is clearly the result of a misdirected attempt to bring to fulfillment the divine promise, and this episode seems not to be the only such instance. Abraham’s attempted manipulations of Pharaoh are not his finest hour. They leave him with wealth, but not the fulfillment of the promise. The attempts of Rebekah and Jacob to deceive bear fruit in a lifetime of deceiving and being deceived. They certainly do not lead to a lifetime of family harmony or leadership. As Joseph plays games with his brothers, his motives may be multifaceted. Certainly, the youthful dreams of his family bowing down to him are part of his thinking. Is he trying to manipulate his father into bowing down to him with his brothers? If so, he fails. So, in these Genesis stories a pattern certainly seems to be emerging. The divine promise is fulfilled by God in his sovereignty as the participants in the story trust in him. It is not fulfilled by human conniving, even by human striving.⁴¹ How close to Paul in all this we are centuries ahead of time!

Conclusion

What a rich perspective Genesis gives us for all that follows! Israel’s God is no tribal god of a limited space. He is the eternal, transcendent sole Creator of all. Creation is good and God is not just interested in “spiritual” things. He is interested in everything, including how we care for his creation. The human drama is part of a larger cosmic conflict between good and evil, in which the very nature of truth is at stake. There is a profound inclination to sin in fallen human beings, one too profound

for humans themselves to fix. Life is not all about work; it is also about rest and relationship. The Sabbath is no mere identity marker for Jews. It is a universal symbol of divine grace. No part of a human being is innately immortal, for life can only ever be a gift from God. We were not created to be alone, and marriage is a divine gift to human beings, not simply an institution of human devising. God works through shattered remnants, but not simply for their own sakes. They are his agents for a global salvation. Redemption is creation restored. The metanarrative undergirding all biblical narratives is paradise lost and found again. The coming of the suffering yet triumphant Messiah is assured. Human conniving to assist the divine will is doomed to failure, as are all human attempts to earn either divine favor or the fulfillment of divine promise. Faith is the only appropriate response to the creator.

Such is the diverse and fundamental theological content of Genesis, briefly as it has been surveyed here. It is self-evidently foundational to the rest of the Bible and therefore a fitting introduction to the canon of Scripture. The final chapter in James McKeown's recent study of Genesis is entitled "Genesis and Biblical Theology." In it he demonstrates the many theological links between Genesis and the rest of the Old Testament. He also states, "Clear thematic continuity may be discerned between Genesis and the New Testament," adding, "It was important for the early Christians to show that they were not establishing a new religion but heralding a new era of blessing in which the promises made to Abraham would be fulfilled through Jesus Christ."⁴² McKeown then concludes, "The book of Genesis has many interrelated themes and characters. It is well suited to be a book of beginnings, since many of these themes and characters are found throughout both Old and New Testaments."⁴³ It is hoped that this brief overview of Genesis has demonstrated the truth of this assessment.

NOTES AND REFERENCES

1. E.g., Victor Hamilton, *The Book of Genesis: Chapters 1-17*, The New International Commentary on the Old Testament (Grand Rapids, MI: William B. Eerdmans, 1990), 30-38, particularly "it is not without significance that recent studies have tended to support the essential unity of Genesis," 38.

2. E.g., s.v. "genesis" in *The Macquarie Dictionary*, 2nd edn., 1991.

3. So translated in most English versions, but literally "light-givers" or "luminaries."

4. The anti-Babylonian polemic of Genesis 1 was first especially developed by Gerhard F. Hasel, "Significance of the Cosmology in Genesis 1 in Relation to Ancient Near Eastern Parallels," *Andrews University Seminary Studies* 10 (1972), 1-20. More recently, note Jan Christian Gertz, "Antibabylonische Polemik im priesterlichen Schöpfungsbericht?" *Zeitschrift für Theologie und Kirche*, 106 (2009), 137-155.

5. See Gerhard F. Hasel, "Meaning of 'Let Us' in Gen 1:26," *Andrews University Seminary Studies* 13 (1975), 58-66.

6. Again the preferred translation, although some more recent versions use "humankind" instead of the generic "man." The NIV is the most frequently quoted version in this chapter.

7. Sigve K. Tonstad, *The Lost Meaning of the Seventh Day* (Berrien Springs, MI: Andrews University Press, 2009), 332-339.

8. *Ibid.*, 390.

9. For a summary of interpretive traditions for understanding Genesis 1:26-28, see Jakob Wöhrle, "Dominium terrae: exegetische und religionsgeschichtliche Überlegungen zum Herrschaftsauftrag in Gen 1:26-28," *Zeitschrift für die alttestamentliche Wissenschaft* 121 (2009), 171-188.

10. The word translated as "work" in the NIV is "the normal Hebrew verb meaning 'to serve.' So again the note is sounded that man is placed in the garden as servant. He is there not to be served but to serve," Hamilton, *Genesis 1-17*, 171.

11. This question was raised by Richard Rice in his Avondale College master's level class, "Issues in Contemporary Theology," July 6, 2010.

12. I do not remember where I first read of the Qur'anic contrast with Genesis at this point. However, an excellent study of the broader issue can be found in Torsten Löfstedt, "The Creation and Fall of Adam: A Comparison of the Quranic and Biblical Accounts," *Svensk missionstidskrift* 93 (2005), 453-477.

13. For further development of the implications of Genesis for an ethic of earth care, see Walter McConnell III, "In His Image: A Christian's Place in Creation," *Asia Journal of Theology* 20 (2006), 114-127; Steven Bouma-Prediger, "Live Wisely and Well: A Biblical Ecological Vision," *Perspectives* 17 (2002), 6-14. On the way a clear

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understanding of the goodness of creation might influence the shape of Christian ministry, see Iain W. Provan, "Creation and Holistic Ministry: A Study of Genesis 1:1-2:3."

14. Tonstad, 51, citing Jon Levenson, *Creation and the Persistence of Evil: The Jewish Drama of Divine Omnipotence* (Princeton: Princeton University Press, 1994), 136.

15. *Ibid.*

16. John H. Sailhamer, "Genesis", in *The Expositor's Bible Commentary*, Frank E. Gaebelin and Richard P. Polcyn, eds., (Grand Rapids, MI: Zondervan Publishing House Academic and Professional Books, 1990), 2:55.

17. For an excellent study of the nature of the deception in Genesis 3, see Beverly J. Stratton, "Out of Eden: Reading, Rhetoric and Ideology in Gen 2-3," *Journal for the Study of the Old Testament Supplementary Series*, No. 208 (Sheffield: Sheffield Academic Press, 1995), 109-156.

18. Cf. John J. Scullion, "What of Original Sin? The Convergence of Genesis 1-11 and Romans 5:12", in *Schöpfung und Befreiung: für Claus Westermann zum 80. Geburtstag*, R. Albertz, ed., (Stuttgart: Calwer Verlag, 1989), 25-36.

19. Sailhamer, "Genesis," 39. Our focus here is especially on the rest aspect of the cycle. However, significant research is currently being conducted on the work aspect by Avondale College PhD student and medical practitioner, Elizabeth Ostring.

20. Stanley L. Jaki, "The Sabbath-rest of the Maker of All," *Asbury Theological Journal* 50/1 (Spring, 1995), 37-38.

21. Niels-Erik Andreasen, *The Old Testament Sabbath: A Tradition-Historical Investigation*, Society of Biblical Literature Dissertation Series, no. 7 (Missoula, MT: Society of Biblical Literature, 1972), 191.

22. O. Palmer Robertson, *The Christ of the Covenants* (Phillipsburg, NJ: Presbyterian & Reformed, 1980), 69.

23. Jacques Doukhan, *The Genesis Creation Story: Its Literary Structure*, Andrews University Seminary Doctoral Dissertation Series, vol. 5 (Berrien Springs, MI: Andrews University Press, 1978), 221-222. See also Richard S. Hess, "Genesis 1-2 in Its Literary Context," *Tyndale Bulletin* 41 (1990), 143-153.

24. Gerhard F. Hasel, "The Sabbath in the Pentateuch", in Kenneth A. Strand, ed., *The Sabbath in Scripture and History* (Washington, DC: Review and Herald, 1982), 25.

25. As in Exod 20:8; Lev 25:10; Deut 5:12; Neh 13:29; Jer 17:22, 24, 27, listed in George V. Wigram, *The New Englishman's Hebrew Concordance: Coded to Strong's Concordance Numbering System*, rev. Jay P. Green (Peabody, MA: Hendrickson, 1984), 1090.

26. Exod 19:12, 23; Lev 25:10; Deut 5:12; Josh 20:9; 2 Kings 10:20; Joel 1:14; 2:15, listed in Wigram, 1090.

27. For more information on Genesis 2:1-3, see H. Ross Cole, "The Sabbath and Genesis 2:1-3," *Andrews University Seminary Studies* 45 (2003), 5-12.

28. *The Works of William Paley*, 1 vol., new edn. (Philadelphia, PA: Crissy & Markley, n.d.), 103.

29. See David Noel Freedman, "Woman, a Power Equal to Man: Translation of Woman as a 'Fit Helpmate' for Man Is Questioned," *Biblical Archaeology Review* 9/1 (January-February, 1983), 56-58.

30. On the significance of human mortality in Genesis, see Trygve N. D. Mettinger, *The Eden Narrative: A Literary and Religio-historical Study of Genesis 2-3* (Winona Lake, IN: Eisenbrauns, 2007), 47-49.

31. N. T. Wright, *Surprised by Hope* (New York: HarperOne, 2008), 155.

32. E.g., in the KJV in Ezra 3:8; Isa 7:3; 10:20-22; 11:11, 16; 14:22; 16:14; 17:3; Zeph 1:4, as listed in Wigram, 1223. For a study of the remnant throughout Genesis, see Gerhard F. Hasel, *The Remnant: The History and Theology of the Remnant Idea From Genesis to Isaiah*, 3rd edn., Andrews University Monographs, Studies in Religion, vol. 5 (Berrien Springs, MI: Andrews University Press, 1980), 135-159.

33. Martin Emmrich, "The Temptation Narrative of Genesis 3:1-6: A Prelude to the Pentateuch and the History of Israel," *Evangelical Quarterly* 73 (2001), 3-20.

34. See J. T. A. G. M. van Ruiten, "Back to Chaos: The Relationship Between Jeremiah 4:23-26 and Genesis 1", in G. H. van Kooten, ed., *The Creation of Heaven and Earth: Genesis 1 in a Jewish, Ancient Near Eastern, Graeco-Roman, Christian, and Modern Context, Themes in Biblical Narrative*, no. 8 (Leiden: Brill, 2004), 21-30.

35. Sailhamer, "Genesis," 20-21.

36. In this section I am especially indebted to the insights of Warren Austin Gage, *The Gospel of Genesis: Studies in Protology and Eschatology* (Eugene, OR: Wipf and Stock, 2001).

37. See C. John Collins, "A Syntactical Note (Genesis 3:15): Is the Woman's Seed Singular or Plural?" *Tyndale Bulletin* 48 (1997), 139-148.

38. Victor P. Hamilton, *The Book of Genesis Chapters 18-50, The New International Commentary on the Old Testament* (Grand Rapids, MI: William B. Eerdmans, 1995), 662.

39. Derek Kidner, *Genesis*, Tyndale Old Testament Commentaries (Nottingham, UK and Downers Grove, IL: InterVarsity Press, 1967), 230.

40. *The NIV Study Bible* (Grand Rapids, MI: Zondervan, 1985), "Genesis," 2.

41. On the way in which the tension between the announcements of plot and plot itself emphasizes the divine sovereignty and the place of human faith, see Laurence A. Turner, *Announcements of Plot in Genesis*, *Journal of the Old Testament Supplementary Series*, no. 96 (Sheffield: JSOT Press, 1990).

42. James McKeown, *Genesis*, The Two Horizons Old Testament Commentary (Grand Rapids, MI: William B. Eerdmans, 2008), 371-372.

43. *Ibid.*, 375.

Chapter 5

A THEOLOGICAL READING OF GENESIS 1¹

Laurence A. Turner

The first eleven chapters of Genesis are the most intensively studied portion of the Old Testament. The scientific and historical aspects of the text still attract scholarly endeavor, but these days almost entirely from conservatives.² Adventist scholarship has a long history of such engagement, with a large proportion of its work being apologetic. The importance of the Sabbath for Adventist theology is one of the major motivations for such work. Unfortunately, the assumption that affirming a literal reading of the narrative establishes its theological truth has resulted in numerous works that deal in detail with the former and largely neglect the latter. No claim is made that the present chapter is a major contribution to redressing the balance, but the hope is that it will indicate the potential of a theological reading of these chapters. By a “theological reading” I have in mind not detailed doctrinal or confessional formulations appropriate to the production of a creed, but rather a reading that foregrounds the inherent thrust of the text: what it states, explicitly or implicitly, about the nature of God, humans, the world and matters of ultimate significance for the life of faith today. Out of necessity I have had to limit my investigation largely to chapter 1 (more specifically 1:1-2:4a), and even then to restrict my inquiry to selected details in the text and to approach them from a limited number of perspectives.

In order to appreciate the internal context of Genesis 1, we need to consider the book’s division into two major sections, primeval (1:1-11:26) and ancestral (11:27-50:26) histories, which indicate the book’s overarching theological interests. The primeval history that takes the reader from the creation of the universe (1:1) and humanity (1:26-27; 2:7, 21-22), by way of a universal flood (*e.g.*, 6:17; 7:19), through to the dispersal of the nations at Babel (11:9) has a universal focus. It asserts divine concern for the whole of creation in general and for humanity in particular. This global focus in chapters 1-11 provides a significant theological preface to the call of Abraham (12:1-3), which governs the ancestral history. The universalism of the primeval history is adopted as the subtext of the ancestral history, in which the one family in focus will be the agent for blessing “all the families of the earth” (12:3).³

Chapters 1-11 thus envision a true universe with a theological integrity grounded in the purposes of the maker of heaven and earth and the redemptive vision of one humanity. Its affirmations of one God, one humanity and an integrated creative/redemptive purpose for the world proclaim a biblical perspective that animates the entire biblical witness.⁴

Genesis 1: Structure

Before embarking on a detailed study of Genesis 1, we need to remember the nature of Hebrew literature. On the surface Genesis as a whole and the primeval history in particular seem to be collections of simple stories for simple readers. This seriously underestimates the complexity of the Genesis stories and the power of stories in general. The narrative books of the Old Testament give ample evidence that the Hebrews explored the most profound aspects of life and faith through this medium. A responsible theological reading of these chapters will, therefore, need to engage with their literary conventions and imagination.⁵ In particular, we should remember that Hebrew authors delighted in writing accounts that had a definite design, often using repeated patterns, which underlined the significance of what they were writing. The Creation account (Gen 1:1-2:4a)⁶ is a good example of this.

An examination of its basic design reveals some essential theological affirmations. God creates new elements in his creation in particular sequence, set out below:

Chaos	
Day 1: Day	Day 4: Sun
Night	Moon/Stars
Day 2: Sea ⁷	Day 5: Fish
Sky	Birds
Day 3: Land	Day 6: Animals
Vegetation	Humans
Day 7: Rest and Sanctification ⁸	

If we read the diagram horizontally, we see that day and night created on day one are balanced by day four, where the sun rules the day and the moon rules the night (v. 16). The sea/waters and sky of day two are matched by the fish that live in the waters and the birds that fly in the sky on day five. Similarly, the land and vegetation created on day three are complemented by the land animals and humans of day six, both of whom live on the land and are sustained by vegetation (vv. 29-30). Just as important as these horizontal pairs, however, is the overarching vertical correspondence, between the chaos with which creation starts, and God's acts of resting and sanctifying with which it concludes.

"Without form and void" is the traditional rendering of the Hebrew words *tōhū wābōhū* in Genesis 1:2. I have chosen the term "chaos" as shorthand for expressing the single concept conveyed by the two terms (an example of hendiadys). There is no suggestion that this chaos was a force actively opposed to God, as in some ancient Near Eastern myths (see below), or that God created something substandard.⁹ Rather, the cosmos was not yet organized, its elements not separated or named, their functions unassigned. It will take Creation week to achieve that order.¹⁰

This simple structure underlines some basic theological issues. First, it challenges the common view that human beings are the climax of the account. The structure suggests, rather, that the highlight of God's achievement, and the point to which all creation moves, is the blessing and sanctification of the seventh day.¹¹ As the conclusion of Creation week, it indicates that creation cannot be limited merely to the production of physical objects. God's blessing, sanctification and rest on the crowning seventh day show that creation is ultimately a *spiritual* matter, climaxed by *holiness*.

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Second, the obvious balance in the structure of the account underlines that God is a God of order. In the same sequence as he creates the “environments” of days one through three, so he creates the creatures to live in or rule those “environments” in days four through six. Even more important, the Creation account presents God bringing order out of chaos. In this context God works with physical chaos and order. However, as the primeval history unfolds, this dynamic will operate at a deeper level – that of moral/spiritual chaos and order, a development anticipated by the climactic note of holiness on the seventh day.¹²

However, the overall balance between the days of creation set out in the diagram above is not the only pattern within the design of the Creation story. Even a surface reading of this chapter shows that the account of each day repeats a number of elements:

- Introduction: “And God said . . .”
- Command: “Let there be . . .”; “Let it be . . .” and so on.
- Report: “And it was so.”
- Evaluation: “And God saw that it was good.”
- Time framework: “And there was evening, and there was morning – the X day.”

So, as one reads this account one settles into a steady rhythm and can predict, to an extent, what will come next. This repetitiveness not only affirms God’s order, but also underlines how *effortless* God’s creation is. Time after time God’s command is obeyed with no opposition and culminates in a good creation.¹³

There is ample evidence, therefore, that this account emphasizes balance, symmetry and repetition and that these features carry theological significance. But Hebrew style often dictates that it is the element producing imbalance or that departs from the norm that is the most important of all.¹⁴ In this account that anomaly is provided by the seventh day. In the first diagram, set out with two matching columns of three days each, the seventh day is unique, with no other day corresponding to it. Similarly, it has none of the elements repeated almost monotonously on all of the other days. It has no introduction, command, report or evaluation.¹⁵ And most tellingly of all, it has no time framework as one would have expected, even in the absence of the other elements. Its uniqueness underlines its significance. Not only is the seventh day blessed, it is also sanctified. Nothing else in the whole of creation, according to Genesis 1, is sanctified. While the precise meaning of *qōdeš* (“holy”) is debated, most scholars believe it connotes “separate,” “set apart.”¹⁶ That uniqueness is emphasized by the structure of the account, in which the holy seventh day stands apart from the other six, departing from the symmetry and balance characteristic of all the other six days.¹⁷

Summary. Even before the content of the Creation account is investigated in any detail, the way in which it is structured indicates some important theological issues. The balance and symmetry of the account indicate that God is a God of order, who brings order out of chaos. He effortlessly creates every physical object. His creation is good. But the fact that the account climaxes with nonphysical holy time, rather than with the creation of humans, shows that God’s work points beyond them.

Relationship to Ancient Near Eastern Thought

Genesis 1 was written in the historical and social context of the ancient Near East, reflecting its literary conventions and aware of its religious worldviews. This is exactly what we should

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expect. All true theology aims to relate to the world in which it exists and with which it is always in dialogue. Indeed, “pure” theology, unrelated to the specifics of human life and culture at a particular time occurs nowhere in the Bible. Any biblical interpreter, therefore, must first ask what a text *meant* in its original setting before reflecting on what it *means* in the present. How Genesis interacts with competing theological views current at the time it was written provides numerous insights into its own theological agenda.¹⁸ One observation on ancient “creation mythologies” will help in an investigation of how Genesis 1 interacts with them. In the ancient world the topic of Creation was seen as being part of larger issues and not an end in itself. So texts containing creation narratives tend to explore the meaning of life, the nature of the gods, human destiny and so on, and the imagery they use in describing creation is an attempt to explain the significance or function of elements of the cosmos in relation to the gods, rather than to provide a description of physical¹⁹ or historical reality.²⁰ These ancient “myths” are therefore primarily “theological,” and provide a fruitful source for comparative theological study with Genesis 1. There are inevitable similarities in some areas, but more tellingly, numerous significant contrasts.

“In the beginning God created the heavens and the earth” (v. 1).²¹ The opening words of Genesis take us to the limits of time – “in the beginning,” and to the limits of space – “heavens and earth.” The heavens are the highest point above; the earth the lowest point below. So “heavens and earth” amounts to a merism, a common idiom in Hebrew that juxtaposes opposites in order to express totality, that is, the two extremes and everything in between. Here it connotes “everything” or “the universe” (cf. 1 Chr 29:11; Psa 115:15-16). As a whole, therefore, the first verse proclaims that God is the Lord of time and space.

This foundational affirmation brings Genesis immediately into conflict with its own cultural context. Let us look at two points in particular. First, it suggests that God is eternal, for he was there “in the beginning.” However, in the ancient Near East gods were not usually seen as being eternal. Thus, the Mesopotamian epic of creation begins with these words:

When skies above were not yet named
Nor earth below pronounced by name, . . .
When yet no gods were manifest,
Nor names pronounced, nor destinies decreed,
*Then gods were born within them.*²²

Here then, there is no belief in the eternity of the gods.

The situation in Egypt was similar. There, some thought that the creator god brought himself into existence. For example,

Praise to you, Atum!
Praise to you, Kheprer, *who created himself!*
You became high in this your name “High Ground”
You created yourself in this your name Kheprer²³

In contrast to these views, Genesis makes no attempt to speculate about the origins of God.

The second point to note is that the opening sentence of Genesis makes a clear distinction between God the Creator and the created cosmos. Again, this forms a contrast with the prevailing view in the ancient world. There, it was commonly held that there was little if any distinction between

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the gods and nature, and the deities are often presented as personifications of the natural world.²⁴ For example, the Egyptians held that “each element of the universe was the embodiment of a particular god,”²⁵ while the Mesopotamians “believed that the gods were totally immanent in nature.”²⁶ So, the first sentence of Genesis has great theological significance, underlined by its contrast with common ancient ideologies. This polemical aspect sets the trend of the Creation account as a whole, which, as we shall see, repeatedly confounds the conventional wisdom of its time.

Genesis 1:1 informs us that God created the heavens and the earth. Then verse 2 turns its attention specifically to the *earth*. In fact, the Hebrew could be translated as, “Now as far as the earth was concerned, it was formless and empty [*tōhū wābōhū*].” Into this state of chaos, God utters his ordering word, “And God said . . .” But to whom was he speaking? There is no other being there to carry out God’s command. Yet he commands and his will is obeyed. In other words, he creates effortlessly.²⁷ This is in sharp contrast, once again, to most beliefs about creation in the ancient world. Then, it was commonly believed that creation was the result of theomachy, that is, a great struggle between the gods. For example, the Babylonian creation epic describes how the great god Marduk battles with Tiamat, the female monster of the deep:

[Marduk] shot an arrow which pierced her belly,
Split her down the middle and slit her heart,
Vanquished her and extinguished her life.
He threw down her corpse and stood on top of her.²⁸

Likewise, in Egypt, there was a battle between Re and the serpent Apophis,²⁹ though divine struggle was not the only mode of creation.³⁰ By contrast, in Genesis there is no battle, but rather an effortless creation. This is one of the theological implications of biblical monotheism. There are no other gods with whom to battle. “This omission of conflict, just at the moment in the narrative when it might be expected, is so marked that its absence indicates a paradigm shift away from the traditional presentation of creation as the product of divine conflict.”³¹

The account of the fourth day (vv. 14-19), in which the heavenly bodies are created, emphasizes their functions. They are “to separate the day from the night” (v. 14) and “light from darkness” (v. 18); “to give light upon the earth” (vv. 15, 17); the sun is “to rule the day,” and the moon “to rule the night” (v. 16); they are also “for signs and for seasons and for days and years” (v. 14). Once again the emphasis on these details is part of Genesis’s theological polemical thrust. This is seen not only in what it mentions, but also in what it omits. In the ancient world generally, the heavenly bodies were believed to be gods who ruled human destinies according to their appearance or position in the sky, as the following passage concerning eclipses illustrates:

An eclipse of the evening watch means plague, an eclipse of the middle watch means diminishing market, an eclipse of the morning watch means the sick will recover. . . . When Sin [the moon] makes an eclipse, you must also consider the month, the day, the watch, the wind, the path and the positions of the stars as they stood during the eclipse, and then you can give [. . . *the deci*]-sion in accordance with its month, its day, its watch, its wind, its path and its star.³²

By contrast, Genesis limits the functions of the sun, moon and stars to separating and governing

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the day and night, shedding light on the earth and “for signs and for seasons and for days and years.” They have no role in human destiny at all, because they are not gods, but simply lights. So the account invites its readers to reject any form of sun or moon worship, and all forms of divination claiming to predict the destiny of individuals or nations based on astrological omens. It also counters a fatalistic view of human existence. This perspective helps to explain what some consider a conundrum. Why does God create light on the first day but the heavenly luminaries only on the fourth day? Actually, this is neither an oversight nor a problem, but rather a theological declaration: God is the source of light. The heavenly bodies are not gods but simply the means he chooses later to fulfill certain roles. To make this point even clearer, note how the account does not use the words “sun” or “moon,” but rather, “the greater light” and “the lesser light.” Presumably, Genesis does this because the Hebrew words for “sun” and “moon” were also the names of the sun-god and moon-goddess in some ancient Near Eastern languages.³³ Describing them merely as “greater light” and “lesser light” passes subtle judgment on the ideology that elevated them to divine status. If the heavenly lights do not control human destiny, then by implication this lies in the hand of God, the Creator of “the heavens and the earth.”

Most English translations render the end of verse 16 as a parenthetical clause, “he also made the stars” (e.g., NIV), or similar. This brief aside carries theological significance, because in much ancient Near Eastern thought the stars were first in astrological importance, placed in primary position: “stars, sun, moon.”³⁴ In Genesis they are mentioned almost as a dismissive afterthought.

That polemical tone is present again on the fifth day, this time reiterating the effortlessness of God’s creation in comparison with the struggle common in other creation mythologies. Egyptian and Mesopotamian texts describe how sea monsters were overcome before the creation of the cosmos.³⁵ In Old Testament poetic texts the term *tannîn*, used here for “great sea monsters” (v. 21), is used in tandem with Rahab and Leviathan, monstrous beasts overpowered by God (Psa 74:13; Isa 27:1; 57:9). In these highly metaphorical biblical texts the term *tannîn* carries the same connotation as in the myths of Israel’s neighbors. Yet in the Genesis Creation account it refers simply to the sea creatures created by God. They are not beasts God has to overcome but are called into existence effortlessly by his word of command.³⁶ We might note in passing that the effortless nature of God’s creating in Genesis 1 contrasts not only with ancient myths of struggle but also with modern views that limit themselves solely to the survival of the fittest as an explanation for life on earth.

The account of the sixth day, which sets out the relationships between human beings and animals on the one hand and with God on the other, is the most overtly theological so far. Initially, we need to note carefully how Genesis presents the nature of human beings. First, animals and human beings have a great deal in common. They are both created on the same day. They both live in the same environment – dry land (vv. 24, 28), and eat the same food – plants (vv. 29-30). But, just as clearly, human beings are not simply animals. They are God’s representatives on earth, for they were created “in the image of God” (v. 27).

Secondly, Genesis 1:26 is crucial for understanding in more detail what human beings actually are, as well as their relationship to God: “Then God said, ‘Let us make humankind in our image, according to our likeness; and let them have dominion over the fish of the sea, and over the birds of the air, and over the cattle, and over all the wild animals of the earth, and over every creeping thing that creeps upon the earth.’” God’s use of the plural “Let us . . .” has intrigued readers for centuries. Why does he not say, “Let me . . .”? Many suggestions have been made, including that it is a “fossil”

left over from the polytheistic origins of the passage; an address to the elements composing the earth, or to the heavenly court; an idiomatic use of the “plural of majesty,” or a “plural of fullness” suggesting the Trinity.³⁷ However, what none of these suggestions explains is why the plural is used in verse 26 *and nowhere else in Genesis 1*. That is to say, if any of the suggestions above are correct, then why is the plural used uniquely in verse 26 and not throughout the chapter?

While no explanation of the plural is without problems, the most likely explanation is that it is a “plural of deliberation.” I tentatively agree with those scholars who suggest that Hebrew sometimes switches from the singular to the plural in order to underline the significance of what is being said.³⁸ For example, in the story of Babel as a whole, God’s actions are expressed through singular verbs. The one exception is when God says, “Come, *let us* go down, and confuse their language there, so that they will not understand one another’s speech” (Gen 11:7). Yet in the next verse it is the Lord alone who acts. “So the LORD scattered them abroad from there over the face of all the earth, and they left off building the city” (v. 8). In this example of the “plural of deliberation,” the use of “let us” underlines just how important and solemn God’s action is. The confusion of language and the scattering of people groups affect the rest of human history. In the same way, the plural is used in 1:26, and nowhere else in the chapter, in order to emphasize just how important human beings are in the grand scheme of God’s creation.

In several ways, then, the significance of human beings is underlined. This high status is theologically important. It marks a radical departure from the worldview of many ancient cultures. For many of these civilizations “human beings possessed little dignity and worth and were thought to be merely slaves of the gods.”³⁹ But in Genesis human beings are God’s representatives on earth, given a divine mandate to rule God’s world. Just as God creates light on the first day and then on the fourth day hands over responsibility for this to the luminaries, so now, after having shown his dominion over the created world by calling it into existence, he hands over responsibility for it to human beings.

This act liberates humanity from the fatalism of many ancient worldviews. However, if human beings are God’s representatives then they must exercise dominion as God would, not merely act in whatever way they wish. Seen in this light, to give humans dominion over the world spells out their responsibilities as much as their rights. Balentine summarizes,

The language of dominion, as is now widely recognized, conveys the notion of a king’s power and responsibility to secure the safety and welfare of his subjects. By analogy, humans are commissioned to act like God, that is, to display the right combination of royal power and gentle compassion so that whatever has been entrusted to them might prosper and realize its fullest potential.⁴⁰

The account of Creation concludes with the seventh day (Gen 2:1-4a). A literal rendering of its opening words would be (v. 1): “Thus [so, and] the heavens and the earth and all their host were completed.” So, as this conclusion looks retrospectively at God’s creative acts, they have been completed by the sixth day. It comes as a surprise, therefore, when the account continues by saying: “And on the seventh day God completed his work” (v. 2a).

Not surprisingly these apparently self-contradictory statements have puzzled some readers, for it seems to say that God had finished what he was doing on the sixth day and then he proceeded to finish it on the seventh day! The Septuagint solves the problem by translating Genesis 2:2a as “And

on the *sixth* day God completed his work.”⁴¹ While this radical substitution of “sixth” for “seventh” certainly solves the problem, and also protects God from accusations that he broke the Sabbath by working on it, it is an obvious adjustment of the text made by the translators. Staying closer to the Hebrew text, the NIV translates it as “By the seventh day God *had* finished the work.” While this translation is possible grammatically, I believe it misses the important theological point the text conveys, and is motivated by a misguided attempt to harmonize the text. A close reading shows that the problem is only imagined. At the end of the sixth day God has indeed completed his creation of the physical universe. That is why Genesis 2:1 says that “*the heavens and the earth* were finished.” All physical things, “the heavens and the earth,” those things that can be experienced by the physical senses – *they* were certainly “finished.” But God’s work is not finished until he blesses and sanctifies the seventh day. It is the climax to all that he does. Thus, the “heavens and the earth” were completed on the sixth day; but God finishes his entire work on the seventh day by creating holy time. This holy seventh day is not part of the heavens and earth. Holy time is a spiritual, not a physical matter. By concluding its description of God’s creation by showing him resting, blessing and sanctifying, the account highlights the place of the “holy” and “spiritual” in the created world.⁴²

The significance of this seventh day of holy rest is not spelled out in detail at this point in Genesis. But enough is said to anticipate what the rest of Scripture will have to say.⁴³ On days one through three God names his creation. On days five and six he blesses it. But on the seventh day he both blesses and sanctifies the day itself. No physical part of the heavens and earth is sanctified, not even human beings who were created in the image of God. The only thing sanctified in the whole of creation is the seventh day. Why should it be distinguished like this? It is God’s final act of separation. Previously God had separated the light from the darkness (Gen 1:4); waters above from waters beneath (v. 7); the dry land from the seas (vv. 9-10). He now separates the seventh day from all other days, advertising that the heartbeat of God’s creation is blessing, holiness and spirituality.

Summary. Rather than being merely of interest to antiquarians, ancient Near Eastern mythologies provide helpful points of contact with Genesis and highlight how the biblical text was in dialogue with the thought of its own time and articulated its theology in that cultural context. From this comparative study the theological emphases and distinctive contributions of Genesis are more easily seen. Its picture of God is of a personal, eternal God, who stands apart from the cosmos he creates and effortlessly brings order out of chaos. Since there are no other gods in this account, the heavenly bodies are relegated to lights in the sky, not having any astrological significance, and thus emphasizing God’s dominion over his creation. At the same time this view spares humans the fatalism inherent in ancient views about the powers of the sun, moon and stars. In addition, humans are accorded a high status underlined by their creation, being introduced by a plural of deliberation, being made in the image of God and acquiring dominion over God’s world in which they receive both rights and responsibilities. Yet despite their significance, it is the Sabbath that is the capstone of Creation.⁴⁴ Holy time, standing outside the confines of human space and beyond the capacity of human physical senses to comprehend, defines Creation as ultimately a divine and holy enterprise.

Sanctuary Symbolism

One element in this account worthy of further theological reflection is the use of sanctuary/temple imagery. Looking initially at the broader canvas, Genesis 1:1 indicates God’s Lordship of

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time (“in the beginning”) and space (“heavens and earth”). Other details underline this. For example, God names what he creates – but not everything. On the first day he names “day” and “night” (v. 5), on the second, “sky” (v. 8) and on the third “land” and “seas” (v. 10). That is, he names the basic elements of time (“day” and “night”) and space (“sky,” “land” and “seas”), and in so doing affirms his sovereignty over them, just as in the account’s opening verse.

The structure of the chapter as a whole actually places primary emphasis not on space, but on *time*:

Time (1:1)

“In the beginning”

- | | |
|--|---|
| 1. Time (Creation of light
producing temporal cycle
of day/night) | 4. Time (Luminaries for
signs/festivals/days/years) |
| 2. | 5. |
| 3. | 6. |

7. Holy Time⁴⁵

Thus, the first words in the account concern time, as do the first acts of creation in each triad. Days 1-6 are punctuated by “. . . first day . . .” “. . . second day . . .”, and so on. And the final statement of the account concerns time – God’s sanctification of the seventh day. Thus, the account’s concern with simple time culminates with holy time.

This holiness in the temporal sphere is matched by the way Genesis 1-2 highlights holiness in the spatial arena. More specifically, within Genesis 1-2 there is a pervasive use of sanctuary symbolism. On the one hand, this occurs in small details here and there. For example, Vogels points out that *mā’ôr*, used here in the plural and translated in Genesis 1 as “lights,” in the Pentateuch always refers to the lamps in the sanctuary (*e.g.*, Exod 25:6). “The sun and the moon are like sacred lamps in the sanctuary of the universe.”⁴⁶

The points of contact between creation and the sanctuary are much more pervasive, however. It is now generally accepted that there are close parallels between the creation of the cosmos in Genesis 1:1-2:4a and the building of the sanctuary beginning in Exodus 25:1.⁴⁷ For example, the instructions to Moses on how to construct the sanctuary echo the seven days of Creation. Six times the divine instructions to Moses commence with “The Lord spoke/said to Moses” (Exod 25:1; 30:11, 17, 22, 34; 31:1). The seventh and final utterance begins, “The LORD said to Moses: you yourself are to speak to the Israelites: ‘*You shall keep my sabbaths*, for this is a sign between me and you throughout your generations, given in order that you may know that I, the LORD, sanctify you’ ” (Exod 31:12-13).⁴⁸

Blenkinsopp’s work, which investigates the use of “solemn conclusion formula” (“Thus were finished . . .,” or similar), has shown that they occur at only three points in the opening books of the Bible. First, at the creation of the world: “Thus the heavens and the earth were finished” (Gen 2:1).

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Second, at the construction of the sanctuary: "In this way all the work of the tabernacle of the tent of meeting was finished; the Israelites had done everything just as the LORD had commanded Moses" (Exod 39:32; cf. 40:33). Third, when establishing the sanctuary in Canaan related to dividing the land between the tribes: "at the entrance of the tent of meeting. So they finished dividing the land" (Josh 19:21).⁴⁹ Within the Pentateuch, therefore, these formulas highlight the significance of creation and the sanctuary and draw them together in suggestive relationship.⁵⁰

In addition to the above, numerous details in Genesis 1-2 resound with sanctuary symbolism. The Garden planted by God is in the east (2:8) and entered from the east (3:24), giving it the same orientation as the Old Testament sanctuary (see Num 3:38; Ezek 8:16), and the restored temple seen in vision by Ezekiel (Ezek 44:1). The man was placed in the Garden "to work (*'bd*) it and take care of (*šmr*) it" (2:15). These same verbs are used elsewhere to describe the duties of priests in the sanctuary (Num 3:7-8; 8:26; 18:7). One of the rivers that rises in Eden is the Gihon (2:13). Elsewhere in the Bible this is unknown as a river. However, due south of the temple area in Jerusalem is the Gihon Spring, the site of Solomon's coronation (1 Kings 1:38-39), and the source for Hezekiah's famous aqueduct that provided water for Jerusalem (2 Chr 32:30). Just as rivers flowed out of Eden and watered the whole earth, so in prophetic vision waters flowed from the temple and brought fertility to desert places, nourishing miraculous trees similar to the tree of life in Eden (Ezek 47:1-12, especially v. 12; cf. Gen 2:9b-10a).⁵¹ Finally, after the tragedy of chapter 3, God placed cherubim at the entrance to the Garden (3:24). Cherubim were prominent in the design of the Israelite sanctuary (e.g., Exod 25:19), Solomon's temple (e.g., 1 Kings 6:24-27) and Ezekiel's vision of God's glory in the restored temple (e.g., Ezek 9:3). Cherubim are mentioned almost one hundred times in the Old Testament, and Genesis 3:24 is one of only two references that do not explicitly connect them to the sanctuary. Significantly, the other reference that does not is Ezekiel 28:13-14, where in poetic imagery the king of Tyre is addressed as having been

in Eden, the garden of God; every precious stone was your covering: carnelian, chrysolite and moonstone, beryl, onyx and jasper, sapphire, turquoise and emerald; and worked in gold were your settings and your engravings. On the day that you were created they were prepared. With an anointed cherub as guardian I placed you; you were on the holy mountain of God.

It is surely significant that not only is Eden linked with "cherub," but also that all of the jewels and gold mentioned were present in the sanctuary, on the vestments and breastplates of the high priest (Exod 28:15-29). What is more, the term "holy mountain" is a common reference to Mount Zion, on which the Jerusalem temple stood (e.g., Psa 48:1-2; 87:1-2, etc.). It has also been suggested, on the basis of archaeological evidence, that the seven-branched candlestick in the temple was a stylized cosmic tree, with a central stem and branches⁵² – that is, the tree of life, also in the Garden of Eden. Taken as a whole, therefore,

The garden of Eden is not viewed by the author of Genesis simply as a piece of Mesopotamian farmland, but as an archetypal sanctuary, that is a place where God dwells and where man should worship him.⁵³

The significance of sanctuary symbolism is seen particularly in the account of the climactic seventh day. In several ancient creation myths the gods desire to create their own resting place.⁵⁴ So,

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for example, in the Babylonian creation myth the god Marduk receives a shrine as his place of rest in the sacred city of Babylon.⁵⁵ The imagery of the temple as God's resting place is also picked up in the Old Testament, "For the LORD has chosen Zion; he has desired it for his habitation: 'This is my resting-place forever' " (Psa 132:13-14). Seen in this context, therefore,

This seventh day is not a theological appendix to the creation account, just to bring closure now that the main event of creating people has been reported. Rather, it intimates the purpose of creation and of the cosmos. God does not set up the cosmos so that only people will have a place. He also sets up the cosmos to serve as his temple in which he will find rest in the order and equilibrium that he has established.⁵⁶

Not only does this context provide insight into the cosmos as a sanctuary, but also into the seventh day as "rest." This is an appropriate conclusion to the Creation account, for rest is what gods did in their sanctuaries once stability had been achieved through the creative process. In Genesis 1, therefore, it marks the appropriate denouement of a sequence of events that began with chaos. God's "rest" in his cosmic temple presages his sovereignty over all creation.⁵⁷ The correspondences outlined above live easily within the OT worldview. Elsewhere it appears quite natural to equate the sanctuary with the cosmos: "He built his sanctuary like the high heavens, like the earth, which he has founded forever" (Psa 78:69). On the other hand, the cosmos can be likened to the sanctuary: "Thus says the LORD: Heaven is my throne and the earth is my footstool; what is the house that you would build for me, and what is my resting place?" (Isa 66:1).

In this verse, the universe is imagined in terms of divine furniture within the divine palace. The world created by God in Genesis 1 is like the divine temple. In short, in Genesis 1, the good, structured creation is built like a temple. In this metaphorical temple, the human person imitates holiness and rest, the order and holiness of the Deity in whose image humanity is made.⁵⁸

Thus, the Genesis Creation narrative constructs a significant theological preface to Scripture. Far from being merely a chronicle of the origins of mundane time and space, these opening chapters of Genesis lay before us the importance of holy time and holy space. In the beginning, Sabbath and sanctuary underline God's presence in time and space.

Yet more implications suggest themselves for those reading within the Adventist tradition. If the cosmos we inhabit is presented as a sanctuary, then what might the consequences be for those of us wishing to live a life of faith? The seventh day of Genesis 1 is *sanctified time*; the recognition of this has a huge impact not merely on Adventist theology but also on our practice. The cosmos in Genesis 1 is a sanctuary, that is, *sanctified space*. However, as far as I am aware, this perspective has received at best muted discussion within Adventist circles. This is all the more strange given the prominence traditionally given to Paul's rhetorical question, "do you not know that your body is a temple of the Holy Spirit within you, which you have from God, and that you are not your own?" (1 Cor 6:19-20). As so often in his writings, Paul moves from theology to practical implications – "therefore glorify God in your body" (v. 20). If Adventist theology can build on Paul's observation regarding our bodies as temples/sanctuaries and develop ethical responses to that, then surely we can consider the ethical consequences of knowing that the world for which we are responsible is no less a sanctuary, within which we live our lives in the very presence of God. At the very least, the implications for

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Adventist involvement in ecological issues and social justice, to name but two obvious areas, rather than being seen as faddish contemporary distractions to our real mission, surely could be considered legitimate concerns arising from our commitment to Scripture's first, and seminal, chapter.

The fact that the biblical text weaves sanctuary symbolism into its account of Creation also constitutes a significant counter to frequent exhortations from certain quarters that the only legitimate approach to Genesis 1 is to read it "literally." This position assumes the text to be one-dimensional. Rather, it is a complex and subtle narrative that works at more than one level, rewarding both literal and theological/symbolic readings. We impoverish our understanding by imposing on it doctrinaire hermeneutical restrictions that fail to do justice to its essential nature.

Conclusion

Having surveyed the Genesis Creation account from several perspectives, we may conclude that it is profoundly theological. As the opening page of Scripture it provides an orientation to God and his world for the believing reader. In order to live in this world with understanding we must comprehend not only the world itself, but also the God who created it. Its picture of God is clearly anthropocentric. Yet at the same time it warns against taking too narrow a view of God and his involvement in the world. In the book of Genesis as a whole, we see in the ancestral history (chapters 12-50), that God is the God of the *chosen people*. Prior to that, in the primeval history as a whole (chapters 1-11), it is clear that God is the God of *all people*. But right at the outset, the Creation account demonstrates that he is the God of *all creation*, human and nonhuman alike. "A god who is understood only as the god of humankind is no longer the God of the Bible."⁵⁹

Genesis 1 reflects the common ancient Near Eastern view that Creation was not an isolated topic complete in itself. It was a vehicle for exploring meaning. Once one moves beyond a surface reading of Genesis 1 one realizes how profound this narrative is, and how inadequate it is to limit one's interest to scientific and historical reconstruction. This latter approach is a direct result of the traditional overwhelmingly apologetic approach that has resulted in much greater emphasis on critiquing opponents in the areas of history and science than in exploring the theology of the text itself.

So much time and energy is consumed tilting at windmills that little gets said about the actual doctrine of creation. Look at this article, or pick up an evangelical book on creation, and you will seldom find a discussion of the issues which properly belong to the heart of the doctrine: our relationship with God the creator in contrast to systems of dualism and pantheism; the meaning and destiny of our own existence grounded in the purpose of God; the goodness of our created lives; creation as the basis of the belief in the intelligibility of our world.⁶⁰

Yet Genesis provides an opportunity for Adventist theology in particular to explore new perspectives on its fundamental beliefs. One obvious example is the use of sanctuary symbolism in the Creation narrative. The sanctified seventh day is highlighted in this account regardless of the perspective from which one reads. That is equally true of its sanctuary imagery, but that aspect of the text has hardly been mentioned in Adventist works. I would suggest that the reason why we are happy to reflect on the Sabbath as part of Creation is because that lies on the surface of the text.

To see sanctuary theology here requires a greater degree of literary engagement,⁶¹ a willingness to accept that these chapters might be more than simple historical accounts of actual events, and an openness to new ways of utilizing Scripture.

When read in its original context, Genesis 1 “is a tract for the times, challenging ancient assumptions about the nature of God, the world, and mankind.”⁶² It would be a pity if we failed to allow it to speak theologically to the fundamental questions of human existence in our own time and to challenge *our* assumptions. It was radical then, it is radical now.

NOTES AND REFERENCES

1. This chapter is a revised, shortened and updated version of a paper presented at the Faith and Science Conference, held at Avondale College, July 11-14, 2003. It also incorporates elements from a number of my previously published works, in particular Laurence A. Turner, *Announcements of Plot in Genesis* (Sheffield: JSOT Press, 1990; reprint, Eugene, OR: Wipf & Stock, 2008); *Genesis, Readings: A New Biblical Commentary*, ed. John Jarick (Sheffield: Sheffield Phoenix Press, 2009); “Genesis, Book of,” in *Dictionary of the Old Testament: Pentateuch*, eds. T. Desmond Alexander and David W. Baker (Downers Grove, IL and Leicester: InterVarsity Press, 2003), 350-359; *Back to the Present: Encountering Genesis in the 21st Century* (Grantham, England: Autumn House, 2004).
2. For an example of such conservative in-house debate, see Gorman Gray, *The Age of the Universe: What Are the Biblical Limits?* (Washougal, WA: Morningstar, 2000); Douglas C. Bozung, “An Evaluation of the Biosphere Model of Genesis 1,” *Bibliotheca Sacra* 162 (October-December 2005), 406-23.
3. Unless otherwise noted, all biblical citations are from the New Revised Standard Version.
4. Kevin Hall, “The Theology of Genesis 1-11,” *Southwestern Journal of Theology* 44 (2001), 70.
5. I have explored the implications of this hermeneutic for Adventist biblical interpretation as a whole in Laurence A. Turner, “The Costly Lack of Literary Imagination in Seventh-day Adventist Biblical Interpretation”, in *Exploring the Frontiers of Faith: Festschrift in Honour of Dr. Jan Paulsen*, eds. Borge Schantz and Reinder Bruinsma (Lueneburg: Advent-Verlag, 2009), 261-276.
6. There is a longstanding scholarly debate as to whether the first account of Creation ends in 2:3 or 2:4a. The context in which this has usually been discussed has been the documentary hypothesis of Pentateuchal origins. My acceptance of 2:4a as its conclusion is in no way connected to that hypothesis, but is rather based on my conviction that the literary dynamics and genre of the passages concerned make a division at this point more likely. See Turner, *Genesis*, 11-12, 25-26.
7. There is a slight ambiguity as to whether the seas should be allocated to day 2 or 3. See Turner, *Genesis*, 11 for further details.
8. For a similar though independent structure, see William P. Brown, *Ethos of the Cosmos: The Genesis of Moral Imagination* (Grand Rapids, MI: William B. Eerdmans, 1999), 38. It is also worth noting that Creation taking place in a seven-day week is unique in the ancient Near East. See, e.g., Jon D. Levenson, *Creation and the Persistence of Evil: The Jewish Drama of Divine Omnipotence* (New York: HarperCollins, 1988), 66.
9. This issue is addressed by Bruce K. Waltke and Cathi J. Fredricks, *Genesis: A Commentary* (Grand Rapids, MI: Zondervan, 2001), 68.
10. For discussions on chaos, see, e.g., Jeph Holloway, “From the Beginning: The Moral Vision of Genesis 1-11,” *Southwestern Journal of Theology* 44 (2001), 80; J. H. Walton, “Creation,” in *Dictionary of the Old Testament: Pentateuch*, eds. T. Desmond Alexander and David W. Baker (Downers Grove, IL and Leicester: InterVarsity Press, 2003), 156.
11. The climactic significance of the seventh day, whether based on structural or other considerations, is increasingly conceded in modern scholarship. See, e.g., Richard J. Clifford, “The Hebrew Scriptures and the Theology of Creation,” *Theological Studies* 46 (1985), 522; Ellen van Wolde, *Stories of the Beginning: Genesis 1-11 and Other Creation Stories*, trans. John Bowden (London: SCM Press, 1996), 32.
12. J. W. Rogerson, “Genesis 1-11,” *Currents in Research: Biblical Studies* 5 (1997), 70-71; Turner, “Genesis, Book of,” in *Dictionary of the Old Testament*, 357.
13. Note there is no evaluation for day 2. See Turner, *Back to the Present*, 14 for the possible significance of this.
14. See, e.g., Robert Alter, *The Art of Biblical Narrative* (London: George Allen & Unwin, 1981), 88-113.
15. See also Brown, *Ethos*, 49.
16. See Victor P. Hamilton, *The Book of Genesis: Chapters 1-17*, New International Commentary on the Old Testament, ed. R. K. Harrison (Grand Rapids, MI: William B. Eerdmans, 1990), 143.
17. “Like the veiled holy of holies of the tabernacle complex, this day stands apart from its surroundings. Yet it does not stand apart from God.” Brown, *Ethos*, 49. See also Gordon J. Wenham, *Genesis 1-15*, Word Biblical Commentary, vol. 1 (Waco, TX: Word Books, 1987), 37.
18. That Genesis 1 adopts a polemical stance towards the creation mythologies of the ancient world is now generally conceded. See, e.g., Clark H. Pinnock, “Climbing Out of a Swamp: The Evangelical Struggle to Understand the Creation Texts,” *Interpretation* 43 (1989), 148-149. The landmark study remains Gerhard F. Hasel, “The Polemic Nature of the Genesis Cosmology,” *Evangelical Quarterly* 46 (1974), 81-102. In the years since Hasel’s article was published, however, more material from the ancient world has become available, and some of his conclusions are now seen as overstated. See, e.g., Walton, “Creation,” 161.

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19. Walton, "Creation," 163, gives the example of the Egyptian sky-goddess Nut, who "is portrayed arching her body over the disk-shaped earth." But, he argues, the Egyptians did not see this as a structural reality, that is, what the earth actually was. "Instead, the portrayal communicates important truths concerning what the Egyptians believed about authority and jurisdiction in the cosmos. These are functional truths, not structural truths."

20. An oft-cited definition of myth is "that which never was but always is."

21. The meaning of the opening sentence continues to be debated. Some modern versions translate this verse not as a separate sentence (i.e., "In the beginning God created the heavens and the earth"), but as a subordinate temporal clause (e.g., NRSV, "In the beginning, when God created the heavens and the earth"). The linguistic issues are too complicated to go in to here. However, while the latter translation is possible, it is not, in my opinion, the most likely one. For a recent discussion see Robert D. Holmstedt, "The Restrictive Syntax of Genesis 1:1," *Vetus Testamentum* 58 (2008), 56-67. Regardless of how one translates, most theological points I make in my comments are not affected.

22. Stephanie Dalley, *Myths From Mesopotamia: Creation, the Flood, Gilgamesh, and Others* (Oxford: Oxford University Press, 2000), 233 (italics supplied).

23. Pyramid Text, Utterance 587, cited in John D. Currid, "An Examination of the Egyptian Background of the Genesis Cosmogony," *Biblische Zeitschrift* 35 (1991), 22.

24. Currid, "Egyptian Background," 26.

25. John D. Currid, *Ancient Egypt and the Old Testament* (Grand Rapids, MI: Baker Books, 1997), 35.

26. *Ibid.*, 38.

27. It lies beyond the scope of this study, but it should be pointed out that other Old Testament Creation texts sometimes utilize "struggle" motifs. See, e.g., Walton, "Creation," 163, cites Psalms 65; 74; 89; 93. However, as he comments, "these scenarios pose no threat to Yahweh but only suggest that he has been and continues to be the force that holds chaos at bay. Unlike the other gods, he never had his authority taken from him, nor did he have to gain or regain a particular status."

28. Dalley, *Myths*, 253.

29. See Robert K. Ritner, "The Repulsing of the Dragon (Coffin Text 160)," in *The Context of Scripture*, vol. 1, *Canonical Compositions From the Biblical World*, eds. William W. Hallo and K. Lawson Younger (Leiden: Brill, 1997), 32.

30. Currid, "Egyptian Background," 29 cites evidence of Egyptian traditions of creation by divine fiat.

31. Mark S. Smith, *The Priestly Vision of Genesis 1* (Minneapolis, MN: Fortress Press, 2010), 69.

32. Šumma Sin ina tamarrišu tablet 4, cited in Ulla Koch-Westenholz, *Mesopotamian Astrology: An Introduction to Babylonian and Assyrian Celestial Divination* (Copenhagen: Museum Tusculanum Press, 1995), 106-107.

33. See Hasel, "Polemic," 89 and appropriate entries in *Hebrew and Aramaic Lexicon of the Old Testament*, eds. Ludwig Koehler and Walter Baumgartner (Leiden: Brill Academic Publishers, 2002).

34. Hasel, "Polemic," 89. See, e.g., Tablet V in Dalley, *Myths*, 255-256.

35. For details, see Walton, "Creation," 163; Clifford, "Theology of Creation," 509; Wenham, *Genesis 1-15*, 37-38.

36. Hasel, "Polemic," 86-87; Walton, "Creation," 160.

37. A convenient summary of these approaches can be found in Gerhard F. Hasel, "The Meaning of 'Let Us' in Gen 1:26," *Andrews University Seminary Studies* 13 (1975), 58-66.

38. See, e.g., Claus Westermann, *Genesis 1-11: A Commentary*, 1974, trans. John J. Scullion (Minneapolis, MN: Augsburg Publishing House, 1984), 145; Rosemary Nixon, "Images of the Creator in Genesis 1 and 2," *Theology* 97 (1994), 190.

39. Currid, *Ancient Egypt*, 48. See also Walton, "Creation," 165.

40. Samuel E. Balentine, *The Torah's Vision of Worship*, *Overtures to Biblical Theology*, ed. Walter Brueggemann (Minneapolis, MN: Fortress Press, 1999), 88.

41. Followed by the New English Bible.

42. I recognize that the OT emphasizes the "rest" rather than "worship" aspect of the Sabbath. However, the rest that takes place in holy time, sanctified by the holy God, is clearly part of the service of God.

43. See, e.g., Exod 16:23-30; 20:8-11; 31:14-16; Lev 23:3; Deut 5:12-14; Isa 56:2, 6; 58:13.

44. When Jesus said, "The Sabbath was made for man, not man for the Sabbath" (Mark 2:27), he was speaking in a particular and narrow context. He was countering the misuse of the Sabbath, where the observance of numerous legal details smothered its true purpose and potential. When God made the Sabbath the climax of Creation, he was not imposing a burden on humanity, but creating an environment where spirituality rather than unrelieved physical work and achievement were given pride of place. In that sense, indeed, "The Sabbath was made for man."

45. Turner, *Genesis*, 10. For discussions of the significance of time in the account, see also Frank H. Gorman Jr., "Priestly Rituals of Founding: Time, Space, and Status," in *History and Interpretation: Essays in Honour of John H. Hayes*, eds. M. Patrick Graham, William P. Brown and Jeffrey K. Kuan (Sheffield: Sheffield Academic Press, 1993), 51-52; Walton, "Creation," 163-164.

46. W. Vogels, "The Cultic and Civil Calendars of the Fourth Day of Creation (Gen 1:14b)," *Scandinavian Journal of the Old Testament* 11, no. 2 (1997), 175.

47. The landmark study was Joseph Blenkinsopp, "The Structure of P," *Catholic Biblical Quarterly* 38 (1976), 275-292. Subsequent scholarship has confirmed the essential correctness of his position. See, e.g., Gorman Jr., "Priestly Rituals."

48. Vogels, "Cultic and Civil Calendars," 178, apparently reflecting E. E. Elnes, "Creation and Tabernacle: The Priestly Writer's 'Environmentalism,'" *Horizons in Biblical Theology* 16 (1994), 144-155. See Gorman Jr., "Priestly Rituals," 56 for similar points of contact with Exodus 40:16-38.

49. Blenkinsopp, "Structure of P," 278. Blenkinsopp's work deals with the structure of the hypothetical P source. In general, however, his argument does not demand acceptance of the documentary hypothesis.

50. On suggested stylistic similarities between Creation and the construction of the sanctuary, see Blenkinsopp, 280.

51. For some of these details, see Gordon J. Wenham, "Sanctuary Symbolism in the Garden of Eden Story," in *Proceedings of the*

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World Congress of Jewish Studies, vol. 9 (1986), 19-25.

52. Levenson, *Persistence of Evil*, 94, citing Carol L. Meyers, *The Tabernacle Menorah*, ASORDS, vol. 2 (Missoula, MT: Scholars Press, 1976), 180.

53. Wenham, "Sanctuary Symbolism," 19.

54. See Levenson, *Persistence of Evil*, 79.

55. E.g., Ritner, *The Context of Scripture*, vol. 1, 401, lines 50-54.

56. Walton, "Creation," 161. See also Brown, *Ethos*, 50-52; Hall, "Theology," 59; cf. Vogels, "Cultic and Civil Calendars," 179.

57. John H. Walton, *The Lost World of Genesis One: Ancient*

Cosmology and the Origins Debate (Downers Grove, IL: IVP Academic, 2009), 74.

58. Smith, *Priestly Vision*, 70.

59. Westermann, *Genesis 1-11*, 176.

60. Pinnock, "Climbing Out of a Swamp," 153. See also Roger E. Timm, "Let's Not Miss the Theology of the Creation Accounts," *Currents in Theology and Mission* 13 (1986), 101.

61. See note 5.

62. Wenham, *Genesis 1-15*, xlv. The quotation relates to Genesis 1-11 as a whole.

Chapter 6

THE ORIGINS OF GENESIS RECONSIDERED

Bryan W. Ball

Genesis, we are frequently reminded, is the book of origins. It sets before us the beginnings of the world and of humankind, of life and death, sin and the first promises of salvation, the Sabbath and marriage, society, civilization and, through the stories of Abraham, Isaac and Jacob, the beginnings of God's chosen people, Israel. Genesis is the foundation upon which the rest of the Bible is built and, as many have correctly claimed, it is an essential cornerstone of historic Christian theology. There is, as one Genesis specialist remarks, "No work known to us from the ancient Near East that is remotely comparable in scope."¹

But what of the origins of Genesis itself? Where did it come from? Who wrote it? When was it written? Is it the work of one author or many? Is the Genesis text reliable? Is it to be understood literally and historically or, as many would claim today, is it largely a myth that must be "demythologized" in order to be understood? And are the first eleven chapters of an entirely different genre from the rest of the book, resulting in a dichotomy rather than a unity? These are all important questions, not only for the book of Genesis itself, but also for the rest of the Bible, and few more crucial than those of origin and historicity.

For most of the last three and a half thousand years of Judeo-Christian history it has been held that Moses wrote Genesis, together with the other four books of the Pentateuch. While this view prevailed virtually unchallenged for so many centuries, nowhere in the Bible is the Mosaic authorship of Genesis actually asserted, although as we shall see, there may be good reason for this. Many competent Jewish and Christian scholars still hold that Moses did write Genesis, either just before or just after the Exodus, that is, at some point c. 1445 BC.² It means that events outlined in the early chapters of Genesis were as ancient to Moses as he is to us, even older by a further three or four thousand years if we accept the chronology of many conservative scholars, and it raises the legitimate question of the source, or sources, of Moses' information. Is it really feasible to think that all the information in Genesis – extensive, detailed genealogies and names of cities and places that had already been lost for centuries by Moses' time – had been handed down orally without loss or corruption through countless generations? Or is it more reasonable to think, without in any way compromising an informed understanding of inspiration, that Moses worked from written sources? The main purpose of this essay is to attempt to provide a coherent, credible answer to these latter questions.

Meanwhile, in the critical atmosphere that arose following the Enlightenment, another theory concerning the origins of Genesis was conceived, a theory seriously at variance with the traditional

view of Mosaic authorship. Known either as the Graf-Wellhausen theory, after the two German scholars who articulated it in its classic form in the 1860s and 1870s, or the documentary hypothesis (DH), since it postulated that Genesis as we now have it was actually composed of various earlier fragmentary documents much later than Moses, this theory quickly came to dominate Old Testament scholarship and has remained a major influence in biblical scholarship ever since. It will be necessary to outline this theory in more detail shortly. Suffice it to say here that from its early days it has attracted a steady stream of well-informed and articulate critics, among them the archaeologist and biblical scholar P. J. Wiseman.

On the basis of considerable archaeological evidence and a careful analysis of the Genesis text, and reacting against the DH that he believed to be seriously flawed, Wiseman proposed that Genesis had originally been written on tablets, by the patriarchs themselves or their appointed scribes, and in the manner in which it was customary throughout the ancient Near East to record important events or to write literary compositions. Wiseman contended that Moses had then compiled Genesis from these ancient and original texts, arguing that the structure of Genesis proves this to be the case. As we shall see, Wiseman's tablet theory is supported at various points by an astonishing amount of archaeological evidence and is presented in a convincing manner and by a sequence of persuasive arguments.

Wiseman first published his views in 1936 as *New Discoveries in Babylonia About Genesis*. The book was reprinted six times by 1953 and was then revised before his death and reissued with a new title, *Clues to Creation in Genesis*, in 1977.³ It was republished again in 1985 as *Ancient Records and the Structure of Genesis*. Of the 1977 edition the InterVarsity magazine wrote, "We can recollect few books so startlingly convincing or so helpful in clearing up many difficulties concerned with the Old Testament. . . . It is one of the best books we have seen."⁴ Similar sentiments have been expressed by many who have read the book in any of its editions.

In this essay we shall attempt to explain the tablet theory with sufficient detail to convey the strength of its arguments and demonstrate how many of its main features are supported by archaeological evidence and by other biblical scholars and ancient Near Eastern specialists. We note here two prominent scholars who have endorsed the tablet proposal, D. J. Wiseman, the author's son and editor of later editions of the book, and R. K. Harrison, author of the impressive *Introduction to the Old Testament*. Wiseman, the son, was himself a distinguished Assyriologist at the British Museum and professor of Assyriology at London University, and general editor of the Tyndale Old Testament Commentary series. It need not be said that his conclusions were based on the arguments and the evidence rather than on any filial relationship. Harrison's *Introduction to the Old Testament* is clearly the work of an able and erudite scholar. Among several other works Harrison co-edited the *New International Dictionary of Biblical Archaeology* and until 1993 served as the first general editor of the *New International Commentary on the Old Testament*. Conclusions reached by scholars of this caliber cannot lightly be dismissed or simply ignored.⁵

The Documentary Hypothesis

Wiseman's tablet theory originated in part from his own profound misgivings concerning the DH and at a time when that hypothesis dominated Old Testament scholarship in general and the origins of Genesis in particular. He regarded it as "misconceived," "unenlightened," "a series of

suggestions” already in his opinion obsolete on account of substantial archaeological discoveries in the ancient Near East.⁶ In order to appreciate Wiseman’s criticisms and reservations and perhaps also for the benefit of readers not well acquainted with the DH, we briefly recount its main features here.

The essence of the theory is that Genesis is not the work of a single author but consists of fragments of several earlier documents of different and unknown authorship and date of origin. These earlier sources were designated J, E and P and were said to reflect the different names for God used in the original text by various authors. Later versions of the theory claim to have discovered yet more sources for the Pentateuch with the consequent addition of D, L and R and the subsequent origin of Genesis, or parts of it, as late as the sixth century BC with the resulting conclusion that much of Genesis was myth rather than history. As one critic points out, “the stories of the patriarchs were sagas or legends,” Genesis containing “no historical knowledge about the patriarchs,” for they were “stories” that arose later among the Israelite people.⁷ The theory is bluntly, but not unfairly, summarized by K. A. Kitchen:

During the later 19th century, rationalistic Old Testament scholarship in Germany decided that the Old Testament accounts of Hebrew history did not fit “history” as it “*should*” have happened, according to their preconceived ideas. Therefore, its leading representatives rearranged the Old Testament writings . . . until Old Testament history, religion and literature had been suitably manipulated to fit in with their philosophical preconceptions.⁸

Yet up to now no one knows who J or E or P really were or even if they or their documents ever existed. Astonishing as it may seem, not one document or fragment has ever been discovered.

Although Wiseman and others protested vigorously against the DH, it remained the dominant influence in Old Testament scholarship for much of the twentieth century. Victor Hamilton’s stimulating commentary on Genesis in the New International Commentary series recognizes the dominating influence of Wellhausen, stating that “Even to this day [1990] he remains one of the ‘founding fathers’ of biblical studies,” being to modern biblical scholarship “what Abraham is to the Jew, the father of the faithful.”⁹ Derek Kidner, who wrote the commentary on Genesis in the Tyndale Old Testament Commentary series (with an introduction by D. J. Wiseman to the 2008 printing of the original 1967 edition), notes, “The old literary analysis of the Pentateuch is in fact still treated as substantially valid.”¹⁰ However, since the 1970s and 1980s opposition to the DH has grown, Rendsburg in his study of Genesis concluding that it is “untenable” and should be “discarded.”¹¹ It will be helpful to note the reasons that have contributed to its decline, since they reflect many of the concerns that led P. J. Wiseman to first propose the tablet theory.

Fundamental to an understanding of the Graf-Wellhausen theory is the fact that its development coincided with the rise and spread of Darwinism. Many writers recognize the underlying evolutionary nature of the DH, but we note here only the representative comments of R. K. Harrison. Pointing out that Wellhausen himself held “evolutionary concepts characteristic of the philosophy of Hegel,” Harrison reminds us that the intellectual climate of the time was dominated by theories of evolution and that Wellhausen’s theory itself “bore all the marks of Hegelian evolutionism” and revealed a “completely unwarranted confidence in the evolutionary *Zeitgeist*.”¹² Harrison also recorded that before his death in 1918 Wellhausen conceded that the critical rationalism he had embraced so

readily in earlier years “had made havoc of his own faith in the authority and authenticity of the Old Testament.”¹³

In that sobering context a more specific criticism was that the theory lacked any objective basis. Harrison commented on the “conjurations” of those who “postulated the documentary and fragmentary theories of Pentateuchal origins,”¹⁴ but it was another distinguished scholar, the Egyptologist and biblical scholar K. A. Kitchen, who stated plainly what he and many others recognized that even “the most ardent advocate of the documentary theory must admit that we have as yet *no single scrap* of external, objective evidence for either the existence or the history of ‘J,’ ‘E’ or any other alleged source document.”¹⁵ The strength of this argument should not be allowed to escape us. The DH was just that, a hypothesis, for which there was no documented, objective evidence whatsoever. It was all conjecture, “conjunction,” as Harrison had put it.

An equally substantial criticism is that the theory was developed and promulgated in almost total ignorance of the ancient Near East and its long literary tradition and literary customs. Kitchen complained strenuously that the prevailing theories in Old Testament studies had been “mainly established in a vacuum with little or no reference to the ancient Near East” and went on to argue that the information available from the Mesopotamian and eastern Mediterranean region better fitted the existing “observable structure of Old Testament history, literature and religion” than the prevailing “theoretical reconstructions” inherent in the DH.¹⁶ Wiseman himself was in no doubt that the DH “originated in an age of ignorance concerning the earliest patriarchal times” and believed that the theory would never have been conceived in the first place had the wealth of archaeological information now available been known at the time.¹⁷ The wealth and weight of archaeological evidence is, in fact, a fundamental argument for Wiseman’s tablet theory as a whole.

Convincing as are the criticisms of the DH mounted by Harrison, Kitchen and others – and they should be read in context and in whole in order to be fully appreciated – it is the careful work of an earlier scholar that perhaps remains the most impressive *exposé* of the theory. It would still be difficult to find a more scholarly and thorough demolition of the DH than that undertaken by the Hebrew scholar Umberto Cassuto, professor of Biblical Studies at the Hebrew University in Jerusalem. Cassuto’s work, written originally in Hebrew, did not come to the attention of the English speaking world until 1961, when it was translated as *The Documentary Hypothesis and the Composition of the Pentateuch*. The book was a careful textual and linguistic analysis of the theory in its entirety, in which Cassuto examined the five pillars on which, in his view, the theory rested. He recognized that its builders had created “an imposing edifice,” noting that in his day they were “still busy decorating its halls and completing its turrets.” But upon examination, the kind of scrutiny to which he himself had subjected it, it would be found “there was nothing to support it.” The DH was “founded on air.” It was “null and void.”¹⁸ As his translator remarked in the introduction to the English edition, Cassuto “examines the basic arguments of the prevailing Higher Critical view one by one, and proceeds to rebut them with compelling logic supported by profound learning.”¹⁹ It was a masterpiece in literary deconstruction and set a course for the many who would follow – Harrison, Kitchen and Wiseman among them.

Cassuto’s work precipitated the beginning of the end for the DH, and although the end may not yet have arrived, many contemporary Old Testament scholars admit that the DH is now *passé*. Indeed, with the decline of the DH one even speaks of the present “methodological crisis” in Genesis

studies.²⁰ Although it remains to be seen just how that “crisis” will be resolved, the tablet theory, with its recognition of the importance of both archaeological evidence and the Genesis text itself must at least merit consideration as a legitimate explanation of the book’s origins. It will be prudent at the same time to remember that Wiseman’s theory is rejected *a priori* by many modern scholars who still cling forlornly to the DH, including some who would otherwise be thought of as conservative.

The Tablet Theory

Wiseman was convinced that Genesis should be allowed to speak for itself in the light of archaeological discoveries that had revealed significant information concerning methods of writing used in ancient times. He thus proposed that

The book of Genesis was originally written on tablets in the ancient script of the time by the Patriarchs who were intimately concerned with the events related, and whose names are clearly stated. Moreover, Moses, the compiler and editor of the book, as we now have it, plainly directs attention to the source of his information.²¹

This is the tablet theory in essence. Wiseman argued that the sheer amount of evidence demanded that Genesis be considered in the ancient environment in which it came into existence.²²

The evidence came principally from the thousands of cuneiform tablets discovered at many sites all across the ancient Near East, beginning with the discovery of Ashurbanipal’s famed library at Nineveh in the early 1850s. It is estimated that since archaeological excavations began in earnest in the mid-nineteenth century as many as five hundred thousand cuneiform tablets have been unearthed at many different sites, most of which are over four thousand years old.²³ They contain a wealth of information concerning virtually every aspect of ancient life and culture and are now scattered in museums all over the world, the majority located in Europe and the United States. Twenty-two thousand tablets from Nineveh alone are now housed in the British Museum.

Wiseman believed that lack of this knowledge had led to major errors in the DH and its underlying presuppositions, four of which he discusses at length:

1. That civilization had developed gradually and appeared late in history.
2. The late development and use of writing.
3. No understanding of ancient literary customs and procedures.
4. The imposition of unfounded theories on the Genesis text.²⁴

As a corrective to these errors, Wiseman argued that the cuneiform literature revealed:

1. The antiquity of civilization.
2. The early development of writing.
3. The need to understand ancient literary customs.
4. That Genesis should be understood in the light of ancient literary practices that had prevailed in patriarchal times.

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Many scholars now support all of the above propositions and the important corollary that Genesis as it now stands was probably based on earlier written material. Cyrus Gordon, professor of Near Eastern Studies at Brandeis University, stated that the sources for Genesis and possibly other Pentateuchal texts “were definitely in written form” before they were incorporated into the present biblical text, and with specific reference to Genesis 5:1 stated that it could only come from “a pre-biblical written source because *sefer* (or *sepher*),” the original word translated in the text as “book,” designated “only an inscribed text.”²⁵ Several other writers have followed Gordon at this point.

The Antiquity of Civilization. Working from the evolutionary assumption that human society developed slowly over long eras of time, proponents of the DH believed that civilization was a recent phenomenon and that any evidence of it, such as writing, was also of late origin. Wiseman was convinced that precisely the opposite was the case. As ground for his understanding of Genesis he refers repeatedly to the great age of civilization, “the high state of civilization in early times,” stating:

It was confidently expected that excavation would support the widely held view of a gradual development of civilisation. But the cumulative evidence to the contrary has grown to such substantial proportions . . . that it seems that soon after the Flood, civilisation reached a peak from which it was to recede. Instead of the infinitely slow development anticipated, it has become obvious that art, and we may say science, suddenly burst upon the world.²⁶

In support of this assertion Wiseman cites other contemporary Near Eastern historians, including H. R. Hall, who wrote in his *History of the Near East*, “When civilisation appears it is already full grown,” and “Sumerian culture springs into view readymade.”²⁷ Kitchen succinctly confirms the foregoing, stating “By 2000 BC the civilized world was already ancient.”²⁸ It is now widely recognized, at least by archaeologists, Assyriologists and other informed ancient Near Eastern authorities, if not by evolutionists, that civilization is considerably older than has been widely believed under the influence of evolutionary theory. As Wiseman himself put it, Sumerian civilization, the oldest now known, “had reached its zenith” centuries before Abraham lived.²⁹

Few have attempted to bring this reality to the attention of a generally uninterested world more than Professor S. N. Kramer. In two books in particular, *History Begins at Sumer* and *The Sumerians, Their History, Culture and Character*, Kramer established beyond any possible doubt that the history of the Sumerian peoples proved that civilization existed much earlier than had been supposed previously and that it had spread widely. Kramer wrote:

By the third millennium BC, there is good reason to believe that Sumerian culture and civilisation had penetrated, at least to some extent, as far east as India and as far west as the Mediterranean, as far south as ancient Ethiopia and as far north as the Caspian.³⁰

Kitchen writes of “the brilliant third millennium BC,” the period between 3200–2000 BC, stating that during this period “the civilisations of Egypt and Sumer reached their first peak of maturity and brilliant achievement,” noting specifically “the emerging brilliance of Mesopotamian culture” as far back even as 5000 BC.³¹ Sir Leonard Woolley wrote in *The Sumerians* that already c. 2000 BC, after

the fall of the third Sumerian dynasty at Ur, Sumerian scribes “took it in hand to record the glories of the great days that had passed away.”³² It appears that Wiseman’s belief in the great antiquity of civilization was well founded.

The Early Development of Writing. It is not too much to claim that writing is the single most evident mark of civilization, the final indicator that civilization has arrived. Wiseman knew that writing had developed early and that its use was widespread long before the times of the patriarchs. He claims it as “one of the most remarkable facts that has emerged from archaeological research,” noting specifically that although the general view has been to insist on the late appearance of writing, “now [*i.e.*, from the mid-twentieth century] the pendulum has swung in the opposite direction, and the present tendency is to thrust back the period for which written records are claimed to about 3500 BC.”³³ The early development and widespread use of writing in the ancient world is a crucial factor in Wiseman’s tablet thesis since it opens up the possibility that Genesis 1-11 could be a transcript from a very old series of written records. It is helpful, then, to know that many other respected authorities testify to the antiquity of writing as well as to the antiquity of civilization itself.

Kramer stated that the Sumerians developed writing into “a vital and effective instrument of communication” pointing out that by the second half of the third millennium BC Sumerian writing techniques could “express without difficulty the most complicated historical and literary compositions.”³⁴ Harrison also noted “the immense antiquity of writing,” arguing that the composition of Genesis should be studied “against the background of ancient Near Eastern literary activity.”³⁵ Kitchen correctly points out, “Throughout the ancient biblical world, not one but several systems of writing were in use, often at the same time,” specifying that “a rich and considerable literature” has survived from Mesopotamia and that cuneiform tablets discovered in profusion in the ancient Hittite capital at Hattusas prove that at least seven different cuneiform languages were used by the Hittites in formulating their records.³⁶ W. G. Lambert confirmed that cuneiform writing was used widely “for international communication” throughout Mesopotamia.³⁷ There is, then, ample confirmation of Wiseman’s claim that writing developed before the time of Abraham and for his assertion that in view of the prevailing literary customs of antiquity it would be surprising if the patriarchs had *not* caused the information now recorded in Genesis to be set down in writing.³⁸

Ancient Literary Customs. Wiseman also understood that the cuneiform literature revealed that ancient scribes used certain literary devices, notably in connecting successive tablets in a series. There were two such practices, the use of catch-lines and colophons, which it is necessary to understand. A catch-line was a sentence or phrase from the last line of a tablet that was repeated at the beginning of the next tablet to insure continuity and, if a series of tablets became disordered, to enable the reader to rearrange them correctly. Sometimes the catch-line could be the title of the document, in this case usually the first few words of the opening tablet. Sometimes a numbering system was added. In his study *The Babylonian Genesis*, Alexander Heidel examined the contents of the now well-known Babylonian creation epic, *Enuma Elish*, dating from the early second millennium BC, which had been written on a series of seven tablets, noting the catch-lines as they appeared on successive tablets.³⁹ It is one of many examples that could be cited. We can perhaps compare catch-lines to the running heads and page numbers of a modern book.

The other frequently used literary device in ancient literature was the colophon. A colophon was the concluding statement on a document and it normally included the name of the scribe or owner

of the tablet (not always the same person) and frequently a reference to the time of composition. Thus, the colophon took the place of the title page in a modern book, but appeared at the end of the document rather than at the beginning. Colophons did not always contain the same amount of information, and the cuneiform literature reveals that the content often varied from scribe to scribe. Occasionally no colophon was used at all. Heidel also referred to the use of colophons in the Assyrian recension of the *Atra-hasīs* epic found in the library of Ashurbanipal at Nineveh, as do Lambert and Millard in their study of the same story. They note that in this case a colophon appears at the end of each tablet “giving such details as we expect on a title-page.”⁴⁰

Wiseman recognized the significance of catch-lines and colophons in ancient texts and referred to them frequently, claiming that a careful analysis of Genesis revealed their recurring presence in the Genesis text and concluding, “There can be little doubt that initially much of the book of Genesis would have been written on tablets [for] on examining the book of Genesis we find that some of these ancient literary usages are still embedded in the present English text.” Referring to the scribes of Nineveh in the second millennium BC who copied tablets that had been written a thousand years earlier using these ancient literary techniques, he argued that the compiler of Genesis had done “precisely the same.”⁴¹ This writer is persuaded that Wiseman conclusively proved his case.

The Structure of Genesis

The foregoing is all necessary background to the central idea in Wiseman’s tablet theory – that much of Genesis was originally written on tablets in ancient times, using the literary customs then current. In the foreword to the 1977 edition of Wiseman’s book, D. J. Wiseman summarized his father’s approach, “Taking his cue from the recurrent catch-lines or colophons in Genesis, he examines them as clues to the literary structure of Genesis and as indicative of its origin and transmission.”⁴² So the structure of Genesis, understood in the light of ancient scribal techniques, lies at the heart of the tablet theory. We must follow Wiseman closely at this point. He maintained that the phrase “These are the generations of . . .” (KJV), used eleven times in Genesis 1-36,⁴³ was “the master-key” to understanding its structure. These eleven uses of the *tôlēdôt* phrase indicated eleven colophons in the text and thus eleven original tablets on which primeval and patriarchal history had been successively recorded.⁴⁴

Perhaps the best way to grasp Wiseman’s argument is to imagine that we have in front of us an original Genesis text as it might have appeared to those who first read it – without chapter or verse divisions and without subheadings in the text to alert us to a change of direction or subject matter – just pages of continuous Hebrew text. How would we know where such changes took place? How would we make sense of it all? Wiseman argued, and virtually all modern scholars now concur, that the phrase “These are the generations of . . .” was the point of transition or change throughout the book. Wiseman was working from the KJV, but most modern versions translate the phrase differently. Rather than confusing the issue these modern versions are actually helpful, as we shall note, since many of them clarify the meaning of the phrase while maintaining its overall structural significance.

This key phrase is now widely referred to as “the *tôlēdôt* formula” since the Hebrew word translated “generations” in the KJV is the word *tôlēdôt* (or *toledôth*). Harrison strongly supports Wiseman’s assertion that the use of the *tôlēdôt* phrase indicates the presence of a colophon and thus

constitutes “part of the concluding sentence of each section, thereby pointing back to a narrative already recorded.” He therefore argues that it is “eminently possible to regard its incidence as indicating the presence of a genuine Biblical source in the text.”⁴⁵ These sources, in the view of both Wiseman and Harrison, were the original tablets on which Genesis had been written. In a section entitled “*Toledot* and the Origins of Genesis” in his *Introduction to the Old Testament*, Harrison also asserts that it was “the clue to the underlying sources” of Genesis and therefore the key to understanding the book.⁴⁶ It is, perhaps, of more than passing interest that even advocates of the DH had long recognized that the *tôlêdôt* phrase was a distinguishing feature of Genesis. S. R. Driver, the early twentieth-century Old Testament and Hebrew scholar, stated that Genesis was cast in a framework “marked by the recurring formula ‘these are the generations of . . . ,’” and that the “entire narrative as we now have it is accommodated to it.”⁴⁷ Harrison notes that many other earlier Genesis scholars believed similarly.

But what does *tôlêdôt* actually mean? The KJV translates it as “generations,” but many modern versions translate it differently. The NKJV, for example, translates it “history” or “genealogy” (in the usual sense of family history), and the NIV translates it “account of.” Wiseman points out that *tôlêdôt* is not the normal Hebrew word for “generations” which is “*dor*,” so translated 123 times in the Old Testament, and frequently used in a future sense. Following the early Hebrew scholar Gesenius, Wiseman argues that the true meaning of *tôlêdôt* is “history,” especially “family history” or “origins of.”⁴⁸ The equivalent phrase in English would then be “these are the historical origins of” or “these are the beginnings of,” which leads us to Wiseman’s fundamental point, “*it is therefore evident that the use of the phrase in Genesis is to point back to the origins of family history and not forward to a later development through a line of descendants.*”⁴⁹ Harrison also insists that the term “is used to describe history” and particularly in Genesis “family history in its origins.”⁵⁰ This history was initially recorded on tablets, and the transition between each tablet was marked by a colophon that contained the *tôlêdôt* phrase. It points backwards to that which precedes it rather than forwards to that which follows.

Wiseman and Harrison both provided tables illustrating the structure of Genesis based on the *tôlêdôt* colophons, and noting the eleven source tablets on which Genesis had originally been written. Harrison’s table follows:

- Tablet 1: Gen 1:1-2:4: The origins of the cosmos.
- Tablet 2: Gen 2:5-5:2: The origins of mankind.
- Tablet 3: Gen 5:3-6:9a: The history of Noah.
- Tablet 4: Gen 6:9a-10:1: The history of Noah’s sons.
- Tablet 5: Gen 10:2-11:10a: The history of Shem.
- Tablet 6: Gen 11:10b-11:27a: The history of Terah.
- Tablet 7: Gen 11:27b-25:12: The history of Ishmael.
- Tablet 8: Gen 25:13-25:19a: The history of Isaac.
- Tablet 9: Gen 25:19b-36:1: The history of Esau.
- Tablet 10: Gen 36:2-36:9: The history of Esau.
- Tablet 11: Gen 36:10-37:2: The history of Jacob.⁵¹

These tablets were written successively as history unfolded, providing an accurate account “of primeval and patriarchal life written from the standpoint of a Mesopotamian cultural milieu.”⁵²

Most contemporary commentators do not follow Wiseman and Harrison, holding instead that the *tôlēdôt* phrase introduces the section in the text which follows. Wiseman was aware of this view and drew attention to the first use of the phrase in Genesis 2:4a, “These are the generations of the heavens and the earth,” or as in the NKJV, “This is the history of the heavens and the earth,” pointing out that in this instance the phrase could not possibly refer to the narrative which followed, but must summarize the Creation account that preceded it. Almost all modern authorities concede that this is so, as do many recent translations of the Bible (e.g., NEB, NRSV, NLT). It would seem then more logical and consistent to think that the phrase would be used in the same way in succeeding instances and Wiseman comments:

The phrase is only appropriate as a concluding sentence. So most commentators, notwithstanding their usual opposite interpretation of the words, make the story of the creation *end* with them. Had they seen that *all* sections of Genesis are *concluded* by the use of this formula they would have recognised the key to the composition of the book.⁵³

This understanding of the *tôlēdôt* phrase is vital to Wiseman’s argument, and his detailed explanation of it deserves careful attention.

Wiseman makes one further important point regarding the *tôlēdôt* phrase. He contends that the name recorded at the end of the phrase on each occasion it is used “refers to the owner or writer of the tablet rather than to the history of the person named.”⁵⁴ This again is in harmony with the content of colophons in ancient usage. As already noted, many authorities recognize the widespread use of colophons in ancient literature, and the enlightening study by E. Leichty summarizes much of what we have, to this point, observed. Leichty states that a colophon was “frequently used in ancient Mesopotamian literature,” that a tablet with a colophon was “often part of a series,” and that in earlier documents the colophon tended to be simple, giving only a name, a date and sometimes, if part of a series, a catch-line.⁵⁵ Wiseman and Harrison both argue persuasively that the name could be either the name of the scribe or the owner of the original tablet. Thus, “These are the origins of Noah” (Genesis 6:9a), does not necessarily mean “this is the history about Noah,” but the history written or possessed by Noah. Wiseman notes that when in chapter 11:27 we read, “These are the generations of Terah” we do not read much subsequently about Terah, for it simply records that he was the son of Nahor. Wiseman says, “The phrase is intended to indicate that Terah either wrote, or had written for him, the list of his ancestors found in verses 10 to 27.”⁵⁶

The colophon, then, concluded the tablet and it included the final *tôlēdôt* phrase that referred to the history or origins of the preceding narrative and the name of the writer or the original owner of the tablet. The eleven tablets were written successively in accordance with the literary norms of the times and as patriarchal history developed, and were eventually edited or compiled by Moses shortly before or shortly after the Exodus, in order that the Israelites would never lose the knowledge of their history. Referring to the characteristics of ancient Near Eastern literature, Harrison remarks:

As with all similar ancient literature, these tablets constituted highly valuable sources for the delineation of patriarchal origins, and it is testimony to their antiquity and to the esteem in which they were held that they have survived in the Hebrew text in something which in all probability approximates to their original form.⁵⁷

Wiseman and Harrison agree that Moses did not compose Genesis, but that he compiled it from a series of ancient tablets recorded as primeval and patriarchal history developed. This is why nowhere in the Bible, let alone in Genesis itself, is it claimed that Moses was the author of the book. Wiseman's own summary fittingly concludes this brief survey of the tablet theory:

The more rigid the tests applied to Genesis, the more minute the examination of its contents in general and the words in particular, the more it is read in the light of the newer facts of archaeology, the more irresistibly does it lead us to the conclusion that Moses . . . compiled the book, using the pre-existing records, which the Patriarchs had named, or he has named, at the end of each section of family histories.⁵⁸

Internal Evidence for the Antiquity of Genesis

If the tablet theory is correct and the early chapters of Genesis were first written in antiquity, we would expect to find evidence of its great age in the text of those early chapters and evidence of subsequent history in later chapters. Wiseman presents several such lines of evidence, although limitations of space prevent us from exploring most of them in any detail.

1. *The presence of Babylonian words in the first eleven chapters.* Wiseman states "only definitely Babylonian words are to be found in the earlier chapters of Genesis" and claims that some linguistic experts believe that the entire atmosphere of these chapters is Babylonian. Harrison also mentions the "large number of Babylonian words that occur in the earlier part of the book."⁵⁹

2. *The use of Egyptian words and reference to Egyptian customs in the later chapters.* The argument here is that when the narrative reaches the point at which Joseph arrives in Egypt "the whole environment changes." Wiseman cites several examples, then concludes, "the person who wrote these chapters was intimately acquainted with Egyptian life and thought," emphasizing "the irresistible testimony" that these later chapters must have been written in Egypt.⁶⁰

3. *References to towns and places that either had ceased to exist or whose original names were already ancient by Moses' time.* Wiseman explains that Moses, as editor/compiler of Genesis, was obliged to add new names to some ancient places so that they could be identified by the Hebrews living in his day. He lists several instances in Genesis 14 alone, a chapter that was part of tablet 7 and written in the time of Abraham. Even in the four hundred or so years between Abraham and Moses, some of these names had been lost, so Moses adds explanatory notes at the appropriate points:

- vv. 2, 8: Bela ("the same is Zoar")
- v. 3: The vale of Siddim ("which is the Salt Sea")
- v. 7: Enmishpat ("which is Kadesh")
- v. 15: Hobah ("which is on the left hand of Damascus")

Another instance is the reference to Hebron in Genesis 23:2 where it is recorded that Sarah died in Kirjath-arba with the explanation "the same is Hebron in the land of Canaan." Not only was the name by which the place was known in Moses' day recorded, but it was also necessary to state that Hebron was in Canaan. Wiseman comments, "this surely indicates that the note was added at a very early date, before the children of Israel had entered the land. No-one in later times would need to be told where Hebron was."⁶¹

4. *Catch-lines in the text.* We have previously noted the use of catch-lines as an ancient literary device to connect successive tablets in a series. Wiseman lists the catch-lines that are evident in the Genesis text, claiming the fact we still find them embedded in the text confirms “the purity with which the text has been transmitted to us.” It is further confirmation that the text had originally been inscribed on tablets.

The catch-lines are as follows:

- 1:1 God created the heavens and the earth.
- 2:4 Lord God made the heavens and the earth.
- 2:4 When they were created.
- 5:2 When they were created.
- 6:10 Shem, Ham and Japheth.
- 10:1 Shem, Ham and Japheth.
- 10:32 After the Flood.
- 11:10 After the Flood.
- 11:26 Abram, Nahor and Haran.
- 11:27 Abram, Nahor and Haran.
- 25:12 Abraham’s son.
- 25:19 Abraham’s son.
- 36:1 Who is Edom.
- 36:8 Who is Edom.
- 36:9 Father of the Edomites (lit. father of Edom).
- 36:43 Father of the Edomites (lit. father of Edom).

Wiseman points to “the striking repetition of these phrases exactly where the tablets begin and end” and says that this repetition “cannot possibly be a mere co-incidence.” The catch-lines had remained buried in the Genesis text, their “significance apparently unnoticed,” until illuminated by the relatively recent understanding of the ancient cuneiform literary practices.⁶²

External Evidence for the Antiquity of Genesis

The internal evidence of the antiquity of Genesis is complemented by a vast amount of external evidence, much of which has been summarized and documented in the works of Kitchen, Harrison and others, and also in the book *I Studied Inscriptions From Before the Flood* (1994). This rather unique title is actually a quotation from the writings of Ashurbanipal, the seventh-century BC king of Assyria whose vast cuneiform library was discovered at Nineveh and was found to contain various early Mesopotamian Creation and Flood accounts, many of them copies of much older texts. The book is a collection of articles first published in scholarly journals in the latter half of the twentieth century, all of which focused on various aspects of Genesis 1-11 in the light of archaeological discovery, cuneiform literature and related ancient Near Eastern studies.

The book contains a paper by D. J. Wiseman entitled “Genesis 10: Some Archaeological Considerations,” in which he examines aspects of the so-called Table of Nations in Genesis 10, a highly condensed account of the three sons of Noah – Shem, Ham and Japheth – their descendents and the repopulation of the earth after the Flood. Wiseman remarks that the text of Genesis 10 “is in

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little doubt” since it is essentially confirmed in 1 Chronicles 1:4-23.⁶³

We note here two of D. J. Wiseman’s conclusions, the first concerning the descendents of Japheth. Recognizing the difficulties in attempting to establish precisely where the Japhethites eventually settled, Wiseman supports the view, based on a “comprehensive survey,” that they inhabited Anatolia and the northeastern Mediterranean region.⁶⁴ He states, “Recent archaeological discoveries, especially the inscriptions found, support the view that the Japhetic list covers the north-eastern Mediterranean-Anatolian region.” He then investigates the geographical boundaries within which the descendents of Ham and Shem eventually settled, as indicated initially in Genesis 10 by “the Hebrew historian.” Reading this chapter, or indeed the preceding study on the Table of Nations, it is impossible to avoid the conclusion that the geographical, archaeological, ethnological and linguistic information under consideration collectively point to historical reality. Wiseman concludes the paper by stating that it is becoming “increasingly clear that the geographical information in Genesis 10 could have been available to the Egyptian court when Moses received his education there in the fifteenth or fourteenth century BC.”⁶⁵

Wiseman also draws attention to a significant aspect of Sumerian civilization. Using phrases such as “literary evidence,” “an increasing number of cuneiform texts” and “contemporary documents” he discusses what may be regarded as the central feature of early postdiluvian civilization, outlined specifically in Genesis 10:10-12. Here are recorded the existence of a number of ancient cities, a reality not generally thought of as characteristic of the early “hunter-gatherers” in the evolutionary chain. It is that the earliest known peoples of the Mesopotamian region were city-dwellers, rather than nomadic tribesmen. Wiseman says:

The predominant feature of Sumerian civilization is that men dwelt in large walled cities. Archaeological investigation has produced no proof for a gradual evolution from village to town and then city. This means that they were industrialists and exported their varied wares, while importing other things necessary for their economy.⁶⁶

It is almost impossible in this context not to think of the Tower of Babel in Genesis 11. Hamilton, in his commentary on Genesis, remarks that it was “the building of the city, and not the tower per se. that provoked the divine displeasure.”⁶⁷ Be that as it may, there is accumulated evidence from at least 2000 BC of trading in sophisticated merchandise throughout Mesopotamia, Asia Minor, India and Egypt, evidence in itself of urban rather than agrarian life. In describing the archaeological evidence from early Mesopotamia, Harrison recounts excavations at Uruk, the biblical Erech of Genesis 10:10, noting that Mesopotamia “saw the development of an increasingly complex urban life” with corresponding widespread commercial activity.⁶⁸ Wiseman himself concludes that such diversified and widespread trading “is abundantly attested by contemporary documents and implies a knowledge of the very areas outlined in Genesis 10.”⁶⁹ It becomes increasingly difficult to ignore the factual content of Genesis 1-11, however condensed and sometimes obscure these early records undoubtedly are.

One further piece of external evidence should also be noted: the Sumerian king list (SKL) as it has come to be known, and the light it throws on Genesis 5. The SKL is a list, part fact and part fiction, of rulers from very early Sumerian times. There are now at least fifteen different versions of the list discovered in several locations and of varying age, but it is generally agreed that the list

goes back to at least 2000 BC, and possibly earlier. This list has attracted the attention of many scholars, and features in at least nine of the studies included in *I Studied Inscriptions From Before the Flood*, in addition to several other works. Later versions of the list divide these early kings into two categories, antediluvian and postdiluvian. It is the antediluvian list that is of most interest, since its earliest versions list ten successive rulers of the antediluvian world.

Two ancient tablets in particular, WB444 and WB62, both located in the Ashmolean Museum in Oxford, have given rise to much discussion, since WB444 lists only eight antediluvian kings, while the earlier WB62 lists ten. J. J. Finklestein, an acknowledged authority on the SKL, states that on the evidence of WB62 “a case can be made out for the existence already at a relatively early date of the ten-king tradition” and argues persuasively that “the scribe of WB62 would not have presumed” to list ten kings if in fact there was “no precedent for a ten-king antediluvian tradition.”⁷⁰ That the ten-king tradition was of early date is confirmed by Lambert and Millard who argue that “the conclusion becomes inescapable that these ten kings were at first an independent tradition only secondarily prefixed to the king list.”⁷¹ It will have become apparent by now to the thoughtful reader that we are dealing here with an account that is in some respects parallel to that of Genesis 5, which lists ten generations between Creation and the Flood, giving the names of the heads of each generation. Ancient Near Eastern specialists have been studying these ancient texts since the early twentieth century, frequently observing the recurrence of “ten rulers” who reigned before the Flood. Wiseman himself states, “It is quite possible that the latter corresponds to the ten patriarchs mentioned in Genesis 5.”⁷² It is also quite possible, in the minds of some even probable, that the number of ten antediluvian kings is derived from the biblical account and thereby verifies its essential veracity and antiquity.

Umberto Cassuto wrote at great length on the topic, reminding us among much else and with much insight that a tradition regarding “ten heads of primeval generations” is to be found in many ancient Oriental cultures, including the Babylonian, Egyptian, Persian and Indian, among others, and that this tradition was reflected in the SKL.⁷³ He speaks of “the world’s ten founding fathers,” affirmed by the Genesis text but in contrast at many points with the SKL account. Commenting on the Genesis 5 record and the SKL, Cassuto said that there was between them “a similarity that cannot be fortuitous” and arguing that while the Sumerian accounts confirmed the biblical account, the latter “purified” and “refined” the diverse and often conflicting accounts of the Sumerian, Mesopotamian and Oriental traditions.⁷⁴ It is also worth noting that the third-century BC Babylonian historian Berossus recorded the ten-king antediluvian tradition in his *Babylonaica*, written in Greek c. 278 BC, Cassuto commenting that “even the late testimony of Berossus” is sufficient to make us aware of “remarkable parallels” between the biblical record and the Babylonian tradition.⁷⁵ It seems that of all the various lists that had proliferated in antiquity, the ten-king version was the earliest and the one that had prevailed by the time Berossus came to write his history or it was the one that he believed retained the most credibility. The antediluvian section of the SKL in its earliest form reminds us once again of the antiquity, integrity and historicity of the Genesis text.

In Conclusion

In *Clues to Creation in Genesis* P. J. Wiseman set out to demonstrate that:

1. Genesis had originally been written on tablets in ancient times by the patriarchs or their scribes,

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2. in accordance with ancient literary customs.
3. Moses later compiled the book as it now stands and
4. that he clearly directs attention to his sources, evidence of which can still be seen in the Genesis text.

Wiseman believed that he had provided ample evidence in support of all the above. We have traced his arguments and observed that many of them and most, if not all, his various lines of evidence have been endorsed by respected scholars from many disciplines. He considered that the evidence *in sum* confirmed his proposal with such “strength and substance” that it required a decision in favor of the writing of Genesis in antiquity in harmony with the customs and techniques of ancient scribes.⁷⁶ If Wiseman was correct, then it clearly requires that the historicity of the early chapters of Genesis be treated with more respect than is frequently the case today.

D. J. Wiseman referred to a number of professionals from various disciplines who had been persuaded, as he himself was, that his father’s approach to Genesis was “the most rational, the most true to the text of Scripture and the most free from difficulties.”⁷⁷ As noted, R. K. Harrison also endorsed that view. The arguments, the reasoning, the evidence from archaeology and from the Genesis text itself, the gaping flaws in the discredited documentary hypothesis and the unity the proposal brings back to the frequently dissected book of Genesis, all combine to call for the careful reading and objective evaluation of Wiseman’s tablet theory. It also illuminates our understanding of the processes of revelation and inspiration. While for various reasons, including the lingering influence of the DH,⁷⁸ the thesis has until now remained a minority viewpoint, it should not be forgotten that objectivity and the continuing quest for truth do not allow arbitrary rejection of any proposal if the arguments and the evidence are sufficiently compelling, or if they lead to greater understanding.

NOTES AND REFERENCES

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2. The *Seventh-Day Adventist Bible Commentary* takes the former view.
3. The 1977 edition also included Wiseman’s other book, *Creation Revealed in Six Days*, first published in 1948. The present study focuses on Wiseman’s first book with the subtitle “Ancient Records and the Structure of Genesis” in the 1977 *Clues to Creation in Genesis*.
4. P. J. Wiseman, *Clues to Creation in Genesis* (London: Marshall, Morgan and Scott, 1977), back cover.
5. The French scholar Jean Astruc (1684-1760) was one of the first to propose that Moses compiled Genesis from original documents, but this cannot be regarded as anticipating the DH since Astruc regarded his thesis as supportive of the Mosaic authorship of Genesis.
6. *Ibid.*, 75-77.
7. J. Wellhausen and H. Gunkel, cited in K. A. Kitchen, *The Bible in Its World* (Exeter: Paternoster, 1977), 57.
8. Kitchen, *The Bible*, 56.
9. Victor P. Hamilton, *The Book of Genesis, Chapters 1-17* (Grand Rapids, MI: William B. Eerdmans, 1990), 13.
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11. G. A. Rendsburg, *The Redaction of Genesis* (Winona Lake, IN: Eisenbrauns, 1986), cited in Hamilton, *Genesis*, 31.
12. R. K. Harrison, *Introduction to the Old Testament* (London: Tyndale Press, 1970), 21-22, 41.
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14. *Ibid.*, 94.
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16. *Ibid.*, 172.
17. Wiseman, *Clues to Creation*, 5.
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26. Wiseman, *Clues to Creation*, 21.
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30. S. N. Kramer, *The Sumerians, Their History, Culture and Character* (Chicago, IL: University of Chicago Press, 1964), 5.
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33. Wiseman, *Clues to Creation*, 25.
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35. Harrison, *Old Testament*, 58, 543.
36. Kitchen, *The Bible*, 17-18.
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38. Wiseman, *Clues to Creation*, 56.
39. A. Heidel, *The Babylonian Genesis*, 2nd edn. (Chicago, IL: University of Chicago Press, 1968), 18-20.
40. W. G. Lambert and A. R. Millard, *Atra-hasis: The Babylonian Story of the Flood* (Oxford: Clarendon Press, 1967), 5.
41. Wiseman, *Clues to Creation*, 33. On the use of catch-lines and colophons in ancient texts, see also Dalley, *Myths From Mesopotamia*, 20, 29, 71, 77 etc.
42. D. J. Wiseman, in foreword to *Clues to Creation*, vi.
43. Gen 2:4; 5:1; 6:9; 10:1; 11:10, 27; 25:12, 19; 36:1, 9; 37:2. Unless otherwise indicated the KJV is cited in all biblical references since this was the version Wiseman worked from.
44. Wiseman, *Clues to Creation*, 34-35.
45. Harrison, *Old Testament*, 547.
46. *Ibid.*, 543.
47. S. R. Driver, *The Book of Genesis* (London: Methuen, 1904), ii.
48. Wiseman, *Clues to Creation*, 36. Cf. also L. Koehler and W. Baumgartner, eds., *The Hebrew and Aramaic Lexicon of the Old Testament* (Leiden: E. J. Brill, 1999), vol. 4, 1700.
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50. Harrison, *Old Testament*, 546.
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59. *Ibid.*, 46; Harrison, *Old Testament*, 552.
60. Wiseman, *Clues to Creation*, 47, 103.
61. *Ibid.*, 48.
62. *Ibid.*, 51-52.
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64. *Ibid.*, 258.
65. *Ibid.*, 265.
66. *Ibid.*, 263.
67. Hamilton, *The Book of Genesis*, 356.
68. Harrison, *Old Testament*, 97-8.
69. D. J. Wiseman, "Genesis 10," 264.
70. J. J. Finklestein, "The Antediluvian Kings: A University of California Tablet," *The Journal of Cuneiform Studies* XVII, no. 2, (1963), 50.
71. Lambert and Millard, *Atra-hasis*, 15.
72. Wiseman, *Clues to Creation*, 17.
73. U. Cassuto, *Commentary on Genesis* (Jerusalem: Hebrew University Press, 1961), 254, emphasis in the original.
74. *Ibid.*, 255, 263.
75. *Ibid.*, 254ff.
76. Wiseman, *Clues to Creation*, 101.
77. *Ibid.*, viii.
78. Hamilton does not support Wiseman's theory or the general view that the first use of the *ôlôdôt* formula in Genesis 2:4a refers to the Creation account that precedes it. He argues that the formula here introduces what follows as it does in all other uses in the subsequent text, but his appeal to the DH in support of his view is as significant as it is surprising, *The Book of Genesis*, 4.

Chapter 7

UNDERSTANDING THE “WHEN” OF CREATION IN GENESIS 1-2*

Richard M. Davidson

The basic elements in the Genesis account of origins are summarized in the opening verse of the Bible, Genesis 1:1:

- | | |
|------------------------------|-----------------------|
| 1. In the beginning | the “when” of origins |
| 2. God | the “who” of origins |
| 3. created | the “how” of origins |
| 4. the heavens and the earth | the “what” of origins |

In this chapter we will concentrate on the first of these elements, the “when” of creation,¹ bearing in mind that the Creation accounts of Genesis 1-2 emphasize the character of God and that the overarching emphasis in these early chapters of Genesis is undoubtedly not so much upon creation as upon the Creator. It will be argued, however, that a basic understanding of the “when” of Creation can be logically and legitimately derived from a careful study of the text itself.

The “When”: “In the Beginning”

In discussing the “when” of Creation, a number of questions arise for which answers may be sought in the biblical text. Does Genesis 1-2 describe an absolute or relative beginning? Does the Genesis account intend to present a literal, historical portrayal of origins, or is some kind of nonliteral interpretation implied in the text? Does the biblical text of Genesis 1 describe a single creation event (encompassed within the Creation week), or is there a prior Creation described in Genesis 1:1, with some kind of gap implied between the description of Genesis 1:1 and Genesis 1:3ff.? Does the Genesis account of origins present a recent beginning (at least for the events described in Genesis 1:3-2:3, including life on earth), or does it allow for long ages since Creation week? We will look at each of these questions.

I. An Absolute or Relative Beginning?

The answer to the question of an absolute versus a relative beginning in Genesis 1 depends to a large degree upon the translation of the first verse of the Bible, Genesis 1:1. There are two major translations/interpretations.

* This chapter is essentially the first section of a much longer article that appeared in the *Journal of the Adventist Theological Society* 14/1 (Spring 2003), under the title “The Biblical Account of Origins.” It was first given as a paper at the International Faith and Science Conference in August 2002. With the approval of the author, Dr. Richard Davidson, the *JATS* article has been shortened and edited for inclusion in this volume. Editing of the text has been minimal, the major differences being the transposition of the original footnotes to endnotes and the omission of material from some of the more extended original notes. The author has also updated the material to include some more recent discussion and resources dealing with the topic.

In the Beginning

A. Independent Clause. The standard translation until recently is as an independent clause – “In the beginning God created the heavens and the earth.”² Such a translation implies that God existed before matter, and thus he created planet Earth “out of nothing” (*creatio ex nihilo*).

B. Dependent Clause. In recent decades some modern versions have translated Genesis 1:1 as a dependent clause, following the parallels in the ancient Near Eastern (hereafter abbreviated ANE) creation stories. So Genesis 1:1 reads, “When God began to create the heavens and the earth . . .” Then Genesis 1:2 is taken as a parenthesis, describing the *state* of the earth when God began to create (“the earth being . . .”). Genesis 1:3 and the following resumes the sentence structure of verse 1 and describes the actual commencement of the work of Creation (“And God said . . .”).³ A serious theological implication follows. If, according to the dependent clause translation, the earth already existed in the state described in Genesis 1:2 when God began to create (Gen 1:1), then God and matter could be seen to be coeternal principles. This conclusion would imply that Genesis 1 does not address the absolute creation of planet Earth, when, as we will see below, in fact it does.

Implications of these two views may be summarized as follows:

Independent Clause

- a. *Creatio ex nihilo* (creation out of nothing) is explicitly affirmed.
- b. God exists before matter.
- c. God created the heavens, earth, darkness, the deep, and water.
- d. There is an absolute beginning of time for the cosmos.

Dependent Clause

- a. No *creatio ex nihilo* is stated or implied.
- b. Matter is already in existence when God began to create.
- c. The heavens, earth, darkness, the deep, and water already existed at the beginning of God’s creative activity.
- d. No absolute beginning is indicated.

Victor Hamilton, in his NICOT commentary on Genesis, summarizes the importance of the proper translation of the opening verse of Scripture:

The issue between these two options – “In the beginning when” and “In the beginning” – is not esoteric quibbling or an exercise in micrometry. The larger concern is this: Does Gen 1:1 teach an absolute beginning of creation as a direct act of God? Or does it affirm the existence of matter before the creation of the heavens and earth? To put the question differently, does Gen 1:1 suggest that in the beginning there was one – God; or does it suggest that in the beginning there were two – God and pre-existent chaos?⁴

Evidence for the traditional view (independent clause) is weighty and I have found it persuasive. This evidence includes the following:

1. Grammar and Syntax. Although the Hebrew word *bĕrēšît* (“in the beginning”) does not have the article, and thus could theoretically be translated as the construct “In the beginning of . . .,” the normal way of expressing the construct or genitive relationship in Hebrew is for the word in its

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construct state to be followed by an absolute *noun*. In harmony with this normal function of Hebrew grammar, when the word *bērešit* occurs elsewhere in Scripture as a construct in a dependent clause, it is always followed by an absolute *noun* (with which it is in construct), not a finite *verb*, as in Genesis 1:1.⁵ Furthermore, in Hebrew grammar there is regularly no article with temporal expressions like “beginning” when linked with a preposition. Thus, “In the beginning” is the natural reading of this phrase. Isaiah 46:10 provides a precise parallel to Genesis 1:1: the term *mērešit* (“from the beginning”), without the article, is clearly in the absolute, and not the construct. Grammatically, therefore, the natural reading of Genesis 1:1 is as an independent clause: “In the beginning God created the heavens and the earth.”

Syntactically, Umberto Cassuto points out that if Genesis 1:1 were a dependent clause, the Hebrew of Genesis 1:2 would have normally either omitted the verb altogether⁶ or placed the verb before the subject.⁷ The syntactical construction that begins Genesis 1:2 with *waw* (“and”) plus a noun (“earth”), indicates “that v. 2 begins a new subject” and “therefore, that the first verse is an independent sentence” (independent clause).⁸

2. *Short Stylistic Structure of Genesis 1*. The traditional translation as an independent clause conforms to the pattern of brief, terse sentences throughout the first chapter of the Bible. As Hershel Shanks remarks, “Why adopt a translation that has been aptly described as a *verzweifelt geschmacklose* [hopelessly tasteless] construction, one which destroys a sublime opening to the world’s greatest book?”⁹

3. *Theological Thrust*. The account of Creation throughout Genesis 1 emphasizes the absolute transcendence of God over matter. This chapter describes One who is above and beyond his creation, implying *creatio ex nihilo* and thus the independent clause.¹⁰

4. *Ancient Versions*. All the ancient versions (LXX, Vulgate, Symmachus, Aquila, Theodotion, Targum Onkelos, the Samaritan transliteration, Syriac, Vulgate, etc.) render Genesis 1:1 as an independent clause.

5. *Parallel With John 1:1*. The prologue to the Gospel of John is clearly alluding to Genesis 1:1, and commences with the same phrase that begins Genesis 1:1 (LXX). In John 1:1, as in the LXX, this phrase “In the beginning [*En archē*]” has no article but is unmistakably part of an independent clause: “In the beginning was the Word.”

The recent¹¹ impetus for shifting to the dependent clause translation of Genesis 1:1 is based ultimately on ANE parallel creation stories that start with a dependent clause.¹² But ANE parallels cannot be the norm for interpreting Scripture. Furthermore, it is now widely recognized that Genesis 1:1-3 does not constitute a close parallel with the ANE creation stories. For example, no ANE creation stories start with a word like “beginning” – the biblical account is unique! Already with Hermann Gunkel, the father of form criticism, we have the affirmation: “The cosmogonies of other people contain no word which would come close to the first word of the Bible.”¹³

Other evidence for the dependent clause interpretation is likewise equivocal. The alleged parallel with the introductory dependent clause of the Genesis 2 Creation account is not as strong as claimed, since, Genesis 2:4b-7, like the ANE stories, has no word like “beginning” in Genesis 1:1, and there are other major differences of terminology, syntax, literary and theological function.¹⁴ The expression *bērešit* elsewhere in the Hebrew Bible (all in Jer 26:1; 27:1; 28:1; 49:34-35) is indeed in the construct, but as noted above, these construct occurrences are consistently followed by an

absolute *noun* (“in the beginning of *the reign* . . .”), as expected in construct chains, whereas Genesis 1:1 is unique in being followed by a finite *verb*, which is not the normal syntax for a construct form. Furthermore, as we have seen above, the use of *mērēšit* “from the beginning” without the article but clearly in the absolute in Isaiah 46:10 shows that *bērēšit* does not need the article to be in the absolute.

In sum, I find the weight of evidence within Scripture decisive in pointing toward the traditional translation of Genesis 1:1 as an independent clause: “In the beginning God created the heavens and the earth.”¹⁵ Here in the opening verse of the Bible we have a distancing from the cosmology of the ANE, an emphasis upon an absolute beginning, in contrast to the cyclical view of reality in the ANE and in contrast to the ANE view that matter is eternal.

II. A Literal or Nonliteral Beginning?

The question of literal or nonliteral interpretation of the Creation accounts in Genesis 1-2 is of major importance both for biblical theology and for contemporary concerns about origins. Many, including already the critical scholar Gunkel at the turn of the twentieth century, have recognized the intertextual linkage in Scripture between the opening chapters of the Old Testament and the closing chapters of the New Testament.¹⁶ In the overall canonical flow of Scripture, because of the inextricable connection between protology (Gen 1-3) and eschatology (Rev 20-22), without a literal beginning (protology), there is no literal end (eschatology). Furthermore, it may be argued that the doctrines of humanity, sin, salvation, judgment, Sabbath and so on presented already in the opening chapters of Genesis, all hinge upon a literal interpretation of origins.¹⁷

Scholars who hold a nonliteral interpretation of Genesis approach the issue in different ways. Some see Genesis 1 as mythology,¹⁸ based upon ANE parallels as already noted. Others see it as literary framework,¹⁹ theology,²⁰ liturgy,²¹ (day-age) symbolism,²² metaphor/parable,²³ vision²⁴ or cosmic temple inauguration.²⁵ Common to all these nonliteral views is the assumption that the Genesis account of origins is not a literal, straightforward historical account of material creation.

Is there any evidence within the text of Genesis itself that would indicate whether or not the Creation account was intended to be taken as literal? Indeed, I find several lines of evidence. First, the literary genre of Genesis 1-11 points to the literal, historical nature of the Creation account. Kenneth Mathews shows how the suggestion of “parable” genre – an illustration drawn from everyday experience – does not fit the contents of Genesis 1, nor does the “vision” genre, since it does not contain the typical preamble and other elements that accompany biblical visions.²⁶ Terence Fretheim, although himself suggesting a liturgical origin for what he considers the precanonical Genesis 1 material, acknowledges that the narrative as it now stands in Genesis 1 has been freed from these cultic/liturgical settings and in its present context is to be interpreted literally as describing the temporal order of creation.²⁷

Walter Kaiser has surveyed and found wanting the evidence for the mythological literary genre of these opening chapters of Genesis, and shows how the best genre designation is “historical narrative prose.”²⁸ More recently, John Sailhamer has come to the same conclusion, pointing out the major differences between the style of the ANE myths and biblical Creation narratives of Genesis 1-2, prominent among which is that the ANE myths were all written in poetry while the biblical Creation stories are not poetry, but prose narratives. Sailhamer states:

The fact that they [the biblical stories of Creation] are written in narrative form rather

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than in poetry shows that at least their author understood them as real accounts of God’s work in creation. Judging from what we know about ancient creation myths, the biblical texts give every impression of having been written and understood as realistic depictions of actual events. It simply will not do to say that the Genesis creation accounts are merely ancient myths and thus should not be taken literally. If we are to respect the form in which we now have them—as narrative—we must reckon with the fact they are intended to be read as literal accounts of God’s activity in creation. . . . As we now have them, Genesis 1 and 2 have all the appearances of a literal, historical account of creation.²⁹

Furthermore, Sailhamer argues that the narratives of Genesis 1-2 lack any indication that they are to be taken as some kind of nonliteral, symbolic/metaphorical “metahistorical” narrative, as some recent evangelicals have maintained, arguing “A straightforward reading of Genesis 1 and 2 gives every impression that the events happened just as they are described [and that] it is intended to be read both realistically and literally.”³⁰ He also points out that the narrative form of Genesis 1-2 is the same as the form of the narrative texts in the remainder of the Pentateuch and the historical books:

The patterns and narrative structures that are so evident in Genesis 1 are found with equal frequency in the narratives which deal with Israel’s sojourn in Egypt and their wilderness wandering. They are, in fact, the same as those in the later biblical narratives dealing with the lives of David and Solomon and the kings of Israel and Judah. If we take those narratives as realistic and literal – which most evangelicals do – then there is little basis for not doing so in Genesis 1.³¹

Sailhamer acknowledges that the Creation narratives are in some respects different from later biblical narratives, but this is because of their subject matter (Creation) and not their literary form (narrative). He then suggests that perhaps we should call Genesis 1 and 2 “mega-history,” describing “literally and realistically aspects of our world known only to its Creator.”³² As megahistory “That first week was a real and literal week – one like we ourselves experience every seven days – but that first week was not like any other week. God did an extraordinary work in that week, causing its events to transcend by far anything that has occurred since.”³³

Second, the literary structure of Genesis as a whole indicates the intended literal nature of the Creation narratives. It is widely recognized that the whole book of Genesis is structured by the word “generations” (*tôlēdôt*) in connection with each section of the book (times thirteen). This is a word used in the setting of genealogies concerned with the accurate account of time and history. It means literally “begettings” or “bringings-forth” (from the verb *yālad* “to bring forth, beget”) and implies that Genesis is the “history of beginnings.” The use of *tôlēdôt* in Genesis 2:4 shows that the author intends the account of Creation to be just as literal as the rest of the Genesis narratives.³⁴ As Mathews puts it,

The recurring formulaic *toledôth* device shows that the composition was arranged to join the historical moorings of Israel with the beginnings of the cosmos. In this way the composition forms an Adam-Noah-Abraham continuum that loops the patriarchal promissory blessings with the God of cosmos and all human history. The text does

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not welcome a different reading for Genesis 1-11 as myth versus the patriarchal narratives.³⁵

Later in his commentary, Mathews insightfully points out how the *tôlēdôt* structuring of Genesis precludes taking the Genesis accounts as only theological and not historical: “If we interpret early Genesis as theological parable or story, we have a theology of creation that is grounded neither in history nor the cosmos. . . . The *toledôth* structure of Genesis requires us to read chap. 1 as relating real events that are presupposed by later Israel. . . . [I]f taken as theological story alone, the interpreter is at odds with the historical intentionality of Genesis.”³⁶

For critical scholars who reject the historical reliability of all or most of Genesis, this literary evidence will only illuminate the intention of the final editor of Genesis, without any compelling force for their own belief system. But for those who claim to believe in the historicity of the patriarchal narratives, the *tôlēdôt* structure of Genesis, including its appearance *six* times within the first eleven chapters of Genesis, is a powerful internal testimony within the book itself that the account of origins is to be accepted as literally historical like the rest of the book.

Other internal evidence within Genesis that the Creation account is to be taken literally, and not as symbolical of seven long ages conforming to the evolutionary model – as suggested by some scholars – involves the use of specific temporal terms. The phrase “evening and morning,” appearing at the conclusion of each of the six days of Creation, is used by the author to clearly define the nature of the “days” of Creation as literal twenty-four-hour days. The references to “evening” and “morning” together outside of Genesis 1 invariably, without exception in the Old Testament (fifty-seven times, nineteen times with *yôm* “day” and thirty-eight without *yôm*), indicate a literal solar day. Again, the occurrences of *yôm* “day” at the conclusion of each of the six “days” of creation in Genesis 1 are all connected with a numeric adjective (“one [first] day,” “second day,” “third day,” etc.), and a comparison with occurrences of the term elsewhere in Scripture reveals that such usage always refers to literal days.³⁷ Furthermore, references to the function of the sun and moon for signs, seasons, days and years (Gen 1:14) indicates literal time, not symbolic ages.

Intertextual references to the Creation account elsewhere in Scripture confirm that the biblical writers understood the six days of Creation to be taken as six literal, historical, contiguous, creative, natural twenty-four-hour days. If the six days of Creation week were to be taken as symbolic of long ages, or of six visionary days of revelation, or anything less than the six days of a literal week, then the reference to Creation in the fourth commandment of Exodus 20:8-11 commemorating a literal Sabbath would make no sense.³⁸ The Sabbath commandment explicitly equates the six days of man’s work followed by the seventh-day Sabbath with the six days of God’s work followed by the Sabbath. By equating man’s six-day workweek with God’s six-day workweek at Creation, and further equating the Sabbath to be kept by humankind each week with the first Sabbath after Creation week as blessed and sanctified by God, the Divine Lawgiver unequivocally interprets the first week as a literal week, consisting of seven consecutive, contiguous twenty-four-hour days.

In penetrating articles Gerhard F. Hasel, Terence Fretheim and James Stambaugh,³⁹ among others, set forth in detail various lines of evidence (including evidence not mentioned here for lack of space) based on comparative, literary, linguistic, intertextual and other considerations, which lead me also to the “inescapable conclusion” that “The author of Genesis 1 could not have produced more comprehensive and all-inclusive ways to express the idea of a literal ‘day’ than the one chosen,” that

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“the designation *yôm*, ‘day,’ in Genesis 1 means consistently a literal twenty-four-hour period,”⁴⁰ and that “God created in a series of six consecutive twenty-four days.”⁴¹

As broader intertextual evidence for the literal nature of the Creation accounts, as well as the historicity of the other accounts of Genesis 1-11, it is important to point out that Jesus and *all* New Testament writers refer to Genesis 1-11 with the underlying assumption that it is literal, reliable history.⁴² Every chapter of Genesis 1-11 is referred to somewhere in the New Testament, and Jesus himself refers to Genesis 1, 2, 3, 4, 5, 6 and 7.

While the nonliteral interpretations of biblical origins must be rejected in what they deny (namely, the literal, historical nature of the Genesis accounts), nevertheless they have an element of truth in what they affirm. Genesis 1-2 is concerned with mythology – not to affirm a mythological interpretation but as a polemic against ANE mythology.⁴³ Genesis 1:1-2:4a is structured in a literary, symmetrical form.⁴⁴ However, the parallelism of days in Genesis 1 is not a literary artifice created by the human author, but is explicitly described as part of the successive creative acts of God himself, who as the Master Designer created aesthetically. The divine artistry of creation within the structure of space and time certainly does negate the historicity of the Creation narrative.

Genesis 1-2 does present a profound theology: doctrines of God, Creation, humanity, Sabbath and so on, but theology in Scripture is not opposed to history. To the contrary, biblical theology is always *rooted* in history. There is no criterion within the Creation accounts of Genesis 1-2 that allows one to separate between cosmogony and cosmology, as some have claimed, in order to reject the details of a literal six-day Creation while retaining the theological truth that the world depends upon God. Likewise there is profound symbolism in Genesis 1. For example, the language describing the Garden of Eden and the occupation of Adam and Eve clearly alludes to the sanctuary imagery and the work of the priests and Levites (see Exod 25-40).⁴⁵ Thus, the sanctuary of Eden is a symbol or type of the heavenly sanctuary (*cf.* Exod 25:9, 40). But the fact that it points beyond itself does not detract from its own literal reality. Neither does the assigning of functions in this Eden sanctuary exclude the material creation that also took place during the literal six days of Creation.⁴⁶

I find it fascinating to note that critical scholars who do not take seriously the authority of the early chapters of Genesis, and thus have nothing to lose with regard to their personal faith, have often acknowledged that the intent of the one who wrote Genesis 1 was to indicate a regular week of six literal days. Against those who would contend that the writer(s) of the early chapters of Genesis do not intend literal history, and that this is the view of “the great majority of contemporary Scripture scholars,” the concordist Alvin Plantinga collects samples of these statements.⁴⁷ For example, Julius Wellhausen, a giant in critical biblical scholarship and popularizer of the documentary hypothesis for the Pentateuch wrote, concerning the author of Genesis: “He undoubtedly wants to depict faithfully the factual course of events in the coming-to-be of the world, he wants to give a cosmogonic theory. Anyone who denies that is confusing the value of the story for us with the intention of the author.”⁴⁸ Again, Hermann Gunkel, father of form criticism, says, “People should never have denied that Genesis 1 wants to recount how the coming-to-be of the world actually happened.”⁴⁹

Plantinga also cites James Barr, whom he describes as “Regus [Regius] Professor of Hebrew in the University of Oxford until he joined the brain-drain to the US, and an Old Testament scholar than whom there is none more distinguished.” Barr writes: “To take a well-known instance, most conservative evangelical opinion today does not pursue a literal interpretation of the creation story

in Genesis. A literal interpretation would hold that the world was created in six days, these days being the first of the series which we still experience as days and nights.” Then, after substantiating that evangelical scholars do not generally hold to a literal interpretation of the Creation account, Barr continues: “In fact the only natural exegesis is a literal one, in the sense that this is what the author meant.”⁵⁰ Elsewhere Barr goes even further:

[S]o far as I know there is no professor of Hebrew or Old Testament at any world-class university who does not believe that the writer(s) of Genesis 1-11 intended to convey to their readers the ideas that: (a) creation took place in a series of six days which were the same as the days of 24 hours we now experience; (b) the figures contained in the Genesis genealogies provide by simple addition a chronology from the beginning of the world up to the later stages of the Biblical story, and (c) Noah’s flood was understood to be worldwide, and to have extinguished all human and land animal life except for those in the ark.⁵¹

Another giant in Old Testament scholarship not cited by Plantinga, Gerhard von Rad, probably the foremost Old Testament theologian of the twentieth century, another critical scholar who refuses to accept as factual what Genesis 1 asserts, nonetheless honestly confesses, “What is said here [Genesis 1] is intended to hold true entirely and exactly as it stands.”⁵² “Everything that is said here [in Genesis 1] is to be accepted exactly as it is written; nothing is to be interpreted symbolically or metaphorically.”⁵³ Von Rad is even more specific regarding the literal Creation week: “The seven days [of Creation week] are unquestionably to be understood as actual days and as a unique, unrepeatable lapse of time in the world.”⁵⁴

We could add to this list of critical scholars the preponderance of major interpreters of Genesis down through the history of the Christian church,⁵⁵ and in modern times “whole coveys or phalanxes” (to use Plantinga’s expression) of conservative-evangelical scholars, who support a literal six-day Creation as the intention of the author of Genesis. This includes numerous recent evangelical commentators. For example, John Hartley: “Ancient readers would have taken ‘day’ to be an ordinary day. . . . A seven-day week of creation anchors the weekly pattern in the created order.”⁵⁶ Again, John Walton writes concerning the Hebrew word for “day”: “We cannot be content to ask, ‘Can the word bear the meaning I would like it to have?’ We must instead try to determine what the author and audience would have understood from the usage in the context. With the latter issue before us, it is extremely difficult to conclude that anything other than a twenty-four hour day was intended. It is not the text that causes people to think otherwise, only the demands of trying to harmonize with modern science.”⁵⁷

Based upon the testimony of the Genesis account and later intertextual allusions to this account, I must join the host of critical and evangelical scholars who affirm the literal, historical nature of Genesis 1 and 2, with a literal/material Creation week consisting of six historical, contiguous, creative, natural twenty-four-hour days, followed immediately by a literal twenty-four-hour seventh day, during which God rested, blessed and sanctified the Sabbath as a memorial of Creation.

But this leads us to our next point, concerning whether all of creation described in Genesis 1-2 is confined to that literal Creation week, or whether there is a creation prior to the Creation week.

III. Multiple or Single Beginning?

Does the first chapter of the Bible depict a single week of creation for all that is encompassed in Genesis 1, or does it imply a prior creation before Creation week, and some kind of time gap between Genesis 1:1 and Genesis 1:3-2:3? This issue focuses upon the relationship between Genesis 1:1-2 and 3ff. Several different interpretations of this relationship have been advanced.

The Active Gap Theory. A first interpretation is often labeled as the “*ruin-restoration*” or the “*active gap*” view. According to this understanding⁵⁸ Genesis 1:1 describes an originally perfect creation some unknown time ago (millions or billions of years ago). Satan was ruler of this world, but because of his rebellion (described in Isa 14:12-17), sin entered the universe. Some proponents of the active gap position hold that God judged this rebellion and reduced the earth to the ruined, chaotic state described in Genesis 1:2. Others claim that Satan was allowed by God to experiment with this world, and the chaos described in Genesis 1:2 is the direct result of satanic experimentation. In any case, those holding this view translate Genesis 1:2: “the earth *became* without form and void.”

Genesis 1:3ff. then presents an account of a later creation in which God restores what had been ruined. The geological column is usually fitted into the period of time of the first creation (Gen 1:1) and the succeeding chaos, and not in connection with the biblical Flood.

The ruin-restoration or active gap theory flounders purely on grammatical grounds: it simply cannot stand the test of close grammatical analysis. Genesis 1:2 clearly contains three noun clauses and the fundamental meaning of noun clauses in Hebrew is something fixed – a state or condition, not a sequence or action.⁵⁹ According to laws of Hebrew grammar, one must translate “the earth *was* unformed and unfilled,” not “the earth *became* unformed and unfilled.” Thus Hebrew grammar leaves no room for the active gap theory.

No Gap and Passive Gap Theories. The “*no gap*” and “*passive gap*” theories are subheadings of an interpretation of biblical cosmogony in Genesis 1 that may be termed the *initial “unformed-unfilled”* view. This is the traditional view, having the support of the majority of Jewish and Christian interpreters through history.⁶⁰ According to this initial unformed-unfilled view (and common to both the no gap and passive gap theories), Genesis 1:1 declares that God created “the heavens and earth” out of nothing at the time of their absolute beginning. Verse 2 clarifies that when (at least) the earth was first created, it was in a state of *tohû* “unformed” and *bohû* “unfilled.” Verses 3ff. then describe the divine process of forming the unformed and filling the unfilled.

I concur with this view because I find that only this interpretation cohesively follows the natural flow of these verses, without contradiction or omission of any element of the text. The flow of thought in Genesis 1-2:4a, according to this view, is as follows:

1. God is before all creation (v. 1).
2. There is an absolute beginning of time with regard to “the heavens and the earth” (v. 1).
3. God creates “the heavens and earth” (v. 1), but (at least) the earth is at first different than now, it is “unformed” and “unfilled” (*tohû* and *bohû*; v. 2).
4. On the first day of the seven-day Creation week, God begins to form and fill the *tohû* and *bohû* (vv. 3ff.).
5. The “forming and filling” creative activity of God is accomplished in six successive literal twenty-four-hour days.

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6. At the end of Creation week, the heavens and earth are finally finished (Gen 2:1). What God began in verse 1 is now completed.
7. God rests on the seventh day, blessing and sanctifying it as a memorial of Creation (vv. 1-4).

The above points seem clear in the flow of thought of Genesis 1-2:4a. However, there is one crucial aspect in this creation process about which it may not be possible to be dogmatic. This concerns *when* the absolute beginning of the heavens and earth in verse 1 occurred: either at the commencement of the seven days of Creation or sometime before. Some see verses 1-2 all as part of the first day of the seven-day Creation week. The “raw materials” described in Genesis 1:1-2 are here included in the first day of the seven-day Creation week. This may be termed the *no gap* interpretation.⁶¹ Others see verses 1-2 as a chronological unity separated by a gap in time from the first day of Creation described in verse 3. The “raw materials” of the earth in their unformed-unfilled state were created before – perhaps long before – the seven days of Creation week. This view is usually termed the *passive gap*.⁶²

Several considerations lead me to prefer the passive gap over the no gap theory. First, as John Hartley points out in his NIB commentary, “The consistent pattern used for each day of creation tells us that verses 1-2 are not an integral part of the first day of creation (vv. 3-5). That is, these first two verses stand apart from the report of what God did on the first day of creation.”⁶³ Hartley is referring to the fact that each of the six days of Creation begins with the words, “And God said . . .” and ends with the formula “and there was evening and there was morning, day x.” If the description of the first day is consistent with the other five, this would place verses 1-2 outside of, and therefore before, the first day of Creation.

Second, the phrase “the heavens and earth” in Genesis 1:1 is most probably to be taken here, as often elsewhere in Scripture, as a merism (*merismus*) that includes the entire universe. This is not to imply that the writer of Genesis (whom I take as Moses) necessarily understood the nature and extent of the universe in exactly the same way as we do today. In fact, he may have known *more* about some phenomena of the universe than modern science has been able to determine. If Moses also wrote the book of Job, then he knew of other worlds with intelligent life-forms (see Job 38:7) while science today can only guess that this might be the case. What I am suggesting is that the merism “heavens and earth” used by Moses in Genesis 1:1 implies that God created “all that is out there,” whatever and wherever it may be, paralleling the expression in John 1:3: “All things were made by him, and without him nothing was made that was made.” So if “heavens and earth” refers to the whole universe, this “beginning” (at least for part of the “heavens”) must have been *before* the first day of earth’s Creation week, since the “sons of God” (unfallen created beings) were already created and sang for joy when the foundations of the earth were laid (Job 38:7).

Third, the dyad “heavens and earth” (entire universe) of Genesis 1:1 is to be distinguished from the triad “heaven, earth and sea” (planet Earth’s three habitats) of Genesis 1:3ff. and Exodus 20:11. This means that the creation action of Genesis 1:1 is outside or before the six-day Creation of Exodus 20:11, and of Genesis 1:3ff.

Fourth, the text of Genesis 1:1 does not indicate how long before Creation week the universe (“heavens and earth”) was created. It could have been millions or billions of years. John Sailhamer

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points out that the Hebrew word for “beginning” used in Genesis 1:1, *ršît*, “does not refer to a point in time, but to a *period* or *duration* of time which falls before a series of events.”⁶⁴ So in the first verse of the Bible we are taken back to the process of time in which God created the universe. Sometime during that process, this earth⁶⁵ was created, but it was initially in an “unformed-unfilled” (*tohû-bohû*) state.⁶⁶ As a potter or architect first gathers his materials, and then at some point later begins shaping the pot on the potter’s wheel or constructing the building, so God, the Master Artist – Potter and Architect – first created the “raw materials” of the earth, and then at the appropriate creative moment, began to form and fill the earth in the six literal days of Creation week.

Fifth, already in the Creation account of Genesis 1:3ff. there is an emphasis upon God’s creating by differentiation or separation involving previously created materials. On the second day God divided what was already present – the waters from the waters (Gen 1:6-8). On the third day the dry land *appeared* (seeming to imply it was already present under the water), and the previously existing earth brought forth vegetation (vv. 9-12). On the fifth day the waters brought forth the fish (v. 20) and on the sixth day the earth brought forth land creatures (v. 24), implying God’s use of preexisting elements. This same pattern seems to be true with the creation of the “greater” and “lesser” lights of the fourth day and the light of the first day.

Sixth, such a two-stage process of creation in Genesis 1, like the work of a potter or architect, is supported by the complementary Creation account of Genesis 2, describing the way God created man and woman. In Genesis 2:7 it is evident that God began with the previously created ground or clay, and from this “formed” the man. There is a two-stage process, beginning with the “raw materials” – the clay – and proceeding to the “forming” of man and breathing into his nostrils the breath of life. It is probably not accidental that the narrator here uses the verb “to form” (*yr*), which describes what a potter does with the clay on his potter’s wheel. The participial form of *yr* actually means “potter,” and Moses may be alluding here to God’s artistic work as a Master Potter.

Similarly, in God’s creation of the woman he follows a two-stage process. He starts with the raw materials that are already created – the “side” or “rib” of the man – and from this God “builds” (*bnh*) the woman. Again, it is certainly not accidental that only here in Genesis 1-2 is the verb *bnh*, “to architecturally design” or “build,” used of God’s creation. He is a Master Designer/Architect as he creates woman!

Finally, other parallels besides God’s artistic work in Genesis 2 seem to point toward a two-stage creation for this earth. We have already mentioned in passing that the work of creation in Genesis 1-2 is described in technical language that specifically parallels the building of Moses’ sanctuary and Solomon’s temple. Such intertextual linkages have led me to join numerous Old Testament interpreters in recognizing that according to the narrative clues, the whole earth is to be seen as the original courtyard and the Garden of Eden as the original sanctuary/temple on this planet. What is significant to note for our purposes at this point is that the construction of both Mosaic sanctuary and Solomonic temple took place in two stages. First came the gathering of the materials according to the divine plans and command (Exod 25:1-9; 35:4-9, 20-29; 36:1-7; 1 Chr 28:1-29:9; 2 Chr 2), and then came the building process utilizing the previously gathered materials (Exod 36:8-39:43; 2 Chr 3-4). A pattern of two-stage divine creative activity seems to emerge from these intertextual parallels, giving further impetus to accepting the passive gap interpretation of Genesis 1.⁶⁷

Despite my preference for the passive gap over the no gap theory, I acknowledge an ambiguity

in the Hebrew of Genesis 1:1-2 that does not allow us to be dogmatic in support of either option. This possible openness in the Hebrew text has implications for interpreting the prefossil layers of the geological column. If one accepts the no gap option, there is a possibility of relatively young prefossil rocks, created as part of the seven-day Creation week (perhaps with the appearance of old age). If one accepts the passive gap option (my preference), there is the alternate possibility of the prefossil “raw materials” being created at a time of absolute beginning of this earth and its surrounding heavenly spheres, perhaps millions or billions of years ago. This initial unformed-unfilled state is described in verse 2. Verses 3ff. then describes the process of forming and filling during the seven-day Creation week.

I conclude that the biblical text of Genesis 1 leaves room for either (a) young prefossil rock, created as part of the seven days of Creation (with appearance of old age), or (b) much older prefossil earth rocks, with a long interval between the creation of the inanimate “raw materials” on earth described in Genesis 1:1-2 and the seven days of Creation week described in Genesis 1:3ff. (which I find the preferable interpretation). But in either case, the biblical text calls for a *short* chronology for the creation of *life* on earth. According to Genesis 1, there is no room for any gap of time in the creation of life on this earth: it occurred during the third through to the sixth of the literal, contiguous twenty-four-hour days of Creation week. That leads us to the next point.

IV. A Recent or Remote Beginning?

We have no information in Scripture as to how long ago God created the universe as a whole. However, there is evidence strongly suggesting that the Creation week described in Genesis 1:3-2:4 was recent, at some time in the last several thousand years, and not hundreds of thousands, millions or billions of years ago. The evidence for this is found primarily in the genealogies of Genesis 5 and 11. These genealogies are unique, with no parallel among the other genealogies of the Bible or other ANE literature.⁶⁸ Richard Hess has shown that there are various subgenres of genealogies, and the genre of the genealogies in Genesis 5 and 11 is very different from the ANE genealogies, with quite different formal characteristics, functions and orientation. According to Hess, the genealogies in Genesis 5 and 11 seem to reveal a different view of history than the ANE parallels, tending to emphasize the forward thrust of history, with attention to specific historical-chronological data concerning each person mentioned in the genealogy (life span and age at which the next name bearer is begotten), which is never given in other ANE genealogies.⁶⁹

Unlike the other genealogies that may (and in fact often do) contain gaps, the “chronogenealogies” of Genesis 5 and 11 have indicators that they are to be taken as complete genealogies without gaps. These unique interlocking features indicate a specific focus on chronological time and reveal an intention to make clear that there are no gaps between the individual patriarchs mentioned. A patriarch lived x years, then begat a son; after he begat this son he lived y more years, and then begat more sons and daughters; and all the years of this patriarch were z years. These tight, interlocking features make it virtually impossible to argue that there are significant generational gaps. Rather, they purport to present the complete time sequence from father to direct biological son throughout the genealogical sequence from Adam to Abraham.

To further substantiate the absence of major gaps⁷⁰ in the genealogies of Genesis 5 and 11, the Hebrew grammatical form of the verb “begat” (*yālad* in the *Hifil*) used throughout these chapters

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is the special causative form that always, elsewhere in the Old Testament, refers to actual direct physical offspring, that is, biological father-son relationship (Gen 6:10; Judg 11:1; 1 Chr 8:9; 14:3; 2 Chr 11:21; 13:21; 24:3). This is in contrast to the use of *yālad* in the simple *Qal*⁷¹ in many of the other biblical genealogies in which cases it can refer to other than direct physical fathering of immediately succeeding offspring. In Genesis 5 and 11, there is clearly a concern for completeness, accuracy and precise length of time.⁷²

There are several different textual versions of the chronological data in these two chapters: MT (Hebrew Masoretic text), LXX (Greek translation) and Samaritan Pentateuch. The scholarly consensus is that the MT has preserved the original figures in their purest form, while the LXX and Samaritan versions have intentionally schematized the figures for theological reasons. But regardless of which text is chosen, it only represents a difference of about one thousand years or so.

Regarding the chronology from Abraham to the present, there is disagreement among Bible-believing scholars whether the Israelite sojourn in Egypt was 215 years or 430 years, and thus whether to put Abraham in the early second millennium or the late third millennium BC; but other than this minor difference, the basic chronology from Abraham to the present is clear from Scripture, and the total is only some four thousand (plus or minus two thousand) years.⁷³

Thus, the Bible presents a relatively recent creation (of life on this earth) a few thousand years ago, not hundreds of thousands or millions or billions. While minor ambiguities do not allow us to pin down the exact date, according to Scripture the six-day Creation week unambiguously occurred *recently* in terms of accepted geochronology. We repeat, for emphasis and clarity, that this does not mean that the whole universe was created in six days, as some ardent creationists have mistakenly claimed. Furthermore, if the passive gap interpretation is correct (as I have argued above), then the creation of “the heavens and the earth” during the span of time termed “in the beginning,” encompassed the whole galactic universe, *including* the planet Earth in its “unformed and unfilled” condition (Gen 1:2).

In Conclusion

Two considerations, at least, arise from our discussion of the “when” in the Genesis Creation account. First, the Creation account is a powerful witness against accepting the Creation week as occupying long ages of indefinite time, as claimed by proponents of progressive creationism. We have found that Genesis 1:3ff. clearly refers to the Creation week as six literal, historical, contiguous, natural twenty-four hour days in which creation took place. We have further concluded that all life on planet Earth was created during this Creation week (days three through six), and not before. Any attempt to bring some kind of progressive creation or some other nonliteral, nonhistorical interpretation of the Creation week of Genesis 1 is out of harmony with the original intention of the text. We have cited numerous quotations from both critical and conservative scholars who acknowledge this fact. Likewise, we have seen that Genesis 1 demands an interpretation of rapid creation for the life-forms on this planet – plants on day three, fish and fowl on day five and the other animals and humans on day six. There is no room in the biblical text for the drawn-out process of evolution (even the so-called rapid evolution) to operate as a methodology to explain the origin of life during Creation week.

Second, this recent creation becomes significant in light of the character of God. It seems

impossible that a God of love would allow pain and suffering to continue any longer than necessary to make clear the issues in the great controversy. He wants to bring an end to suffering and death as soon as possible. It is totally out of character with the God of the Bible to allow a history of cruelty and pain to go on for long periods of time – millions of years – when it would serve no purpose in the cosmic controversy against Satan. Thus, the genealogies (as well as the Creation account itself), pointing to a recent creation, are a window into the heart of a loving, compassionate God.

In the introduction to this chapter we alluded to the character of God as underlying the Genesis record. Any interpretation of the biblical account of origins must recognize the necessity of remaining faithful to the portrayal of God's character in Genesis, as in the rest of Scripture. Interpretations of these chapters that present God as an accomplice, active or passive, in an evolutionary process of survival of the fittest, millions of years of predation, prior to the fall of humans, must seriously reckon with how these views impinge upon the character of God. I would argue that perhaps the greatest reason to reject evolution, theistic evolution or progressive creation is that they malign the character of God, making him responsible for millions of years of death, suffering, natural selection, survival of the fittest, even *before* sin. Creation and evolution in any form are biblically, theologically and semantically incompatible.

NOTES AND REFERENCES

1. This emphasis upon the "when" of Creation is in stark contrast with that of e.g., Raymond F. Cottrell, "Inspiration and Authority of the Bible in Relation to Phenomena in the Natural World", in James L. Hayward, ed., *Creation Reconsidered: Scientific, Biblical, and Theological Perspectives* (Roseville, CA: Association of Adventist Forums, 2000), 203, who claims "The Bible writers have much to say about who created the universe [which according to Cottrell refers exclusively to 'the atmospheric heavens, or sky, and to the surface of the earth,' 197], some to say about why he created it, little to say about how he created it, and nothing to say about when he created it." Likewise, this is contra Frederick J. Harder, "Theological Dimensions of the Doctrine of Creation", in *Creation Reconsidered*, 282, who writes, "Indeed, there is total lack of concern in the biblical record with the question of 'when' [the 'when' of creation]."

2. Examples of modern English versions with this translation include ESV, JPS, NASB, NIV, NJB, NKJV and RSV.

3. Recent translations with this reading include GNB, NAB, NEB, NJPS (Tanakh) and NRSV.

4. Victor P. Hamilton, *The Book of Genesis: Chapters 1-17*, New International Commentary on the Old Testament (Grand Rapids, MI: William B. Eerdmans, 1990), 105.

5. Jer 26:1; 27:1; 28:1; 49:34. In each of these passages, the word *bērēšit* is part of a clause that may be translated "in the beginning of the reign of X."

6. If v. 2 constituted a parenthesis, as suggested by Ibn Ezra and his modern counterparts. A parallel situation is found in I Sam 3:2-4; see Umberto Cassuto, *A Commentary on the Book of Genesis, Part One: From Adam to Noah* (Jerusalem: Magnes Press, 1978), 19-20.

7. If v. 2 constituted the main clause of the sentence, as suggested by Rashi and his modern counterparts. Parallels for this construction are found in Jer 26:1; 27:1; 28:1 and Hos 1:2; see

Cassuto, *Commentary*, 19.

8. *Ibid.*, 20. Gordon J. Wenham, *Word Biblical Commentary: Gen 1-15* (Waco, TX: Word, 1987), 15: " 'And' + noun (= earth) indicates that v. 2 is a disjunctive clause."

9. Hershel Shanks, "How the Bible Begins," *Judaism* 21 (1972), 58.

10. See Brevis S. Childs, *Myth and Reality in the Old Testament*, Studies in Biblical Theology, no. 27 (London: SCM, 1962), 32.

11. The dependent clause view is not totally new to modern times. It was proposed already in medieval times by the Jewish scholars Rashi and Ibn Ezra. However, John Sailhamer, "Genesis," *The Expositor's Bible Commentary* (Grand Rapids, MI: Zondervan, 1990), 2:21-22, shows that these scholars did not reject the traditional reading (independent clause) on grammatical grounds, but because of their preunderstanding of cosmology in which the heavens were created from fire and water, and thus the water of Genesis 1:2 must have been in existence prior to v. 1. Hence v. 1 could not refer to an absolute beginning and an independent clause reading was impossible. As with the biblical scholars of this last century, the worldview of these medieval interpreters became the external norm for interpreting the biblical text.

12. E.g., *Enuma Elish* ("When on high . . ."). The Atrahasis Epic also begins with a dependent clause and the beginning of the Eridu Genesis is probably the same, but is not extant. These are the three main ancient Mesopotamian versions of the Creation story discovered by archaeologists: the Sumerian Eridu Genesis (dating originally from c. 1700-1600 BC), the Old Babylonian Atrahasis Epic (dating from c. 1800-1600 BC), and the Assyrian *Enuma Elish* (the copy from Ashurbanipal's library dates from the seventh century BC, but the composition of the story probably dates from the early second millennium BC). The discovery of these ANE parallels with the biblical account led most critical scholars of the nineteenth and

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twentieth centuries to posit that the biblical account of origins in Genesis is borrowed from the older Mesopotamian stories, and thus many concluded that the Genesis account, like its ANE counterparts, is to be read as a mythological text, not a literal, historical, factual portrayal of origins. For translations of these stories, see Alexander Heidel, *The Babylonian Genesis [Enuma elish]*, 2nd edn. (Chicago, IL: University of Chicago Press, 1963); W. G. Lambert and A. R. Millard, *Atrahasis: The Babylonian Story of the Flood* (Oxford: Oxford University Press, 1969); Thorkild Jacobsen, "The Eridu Genesis," *Journal of Biblical Literature* 100/4 (1981), 513-529.

13. Hermann Gunkel, *Genesis*, Handkommentar zum Alten Testament (Göttingen: Vandenhoeck & Ruprecht, 1961), 101.

14. See Gerhard Hasel, "Recent Translations of Genesis 1:1: A Critical Look," *Bible Translator* 22 (1971), 161, for a listing of these crucial differences.

15. A few interpreters affirm an independent clause as the best translation of Genesis 1:1, and yet still find no absolute beginning of Creation in this chapter. These interpreters take Genesis 1:1 as an independent clause, but also as a summary statement, or formal introduction/title that is then elaborated in the rest of the chapter; see, e.g., Cottrell in *Creation Reconsidered*, 198-199; Hamilton, *Genesis*, 117. Genesis 1:2 is seen as a circumstantial clause connected with v. 3: "Now the earth was unformed and unfilled. . . . And God said, 'Let there be light.'" The actual creating only starts with v. 3. Against the interpretation of v. 1 as a summary statement, see John Sailhamer, *Genesis Unbound: A Provocative New Look at the Creation Account* (Sisters, OR: Multnomah Books, 1996), 102-103, 163. I find Sailhamer's arguments persuasive and conclude that Genesis 1:1 is not simply a summary or title of the whole chapter.

16. Hermann Gunkel, *Schöpfung und Chaos* (Göttingen: Vandenhoeck & Ruprecht, 1895). For recent comment, see Michael G. Hasel, "In the Beginning—The Relationship Between Protology and Eschatology", in R. Du Preez and J. Moskala, eds. *The Cosmic Battle for Planet Earth* (Berrien Springs, MI: Seventh-day Adventist Theological Seminary, 2003), 17-32.

17. The interconnection is often stated thus: If humans are only a product of time and chance from the same evolutionary tree as the animals, then they are no more morally accountable than the animals; if not morally accountable, then there is no sin; if no sin, then no need of a Savior; and if no literal seven-day Creation, then no literal Sabbath. While this may be simplistically stated here, it does point to a profound interrelationship between origins and the other biblical doctrines. These themes are examined in more detail in the final chapter of this volume. For further discussion of these interrelationships, see Michael G. Hasel, "In the Beginning," *Adventist Review*, October 25, 2001, 24-27; E. Edward Zinke, "Theistic Evolution: Implications for the Role of Creation in Seventh-day Adventist Theology", in John T. Baldwin, ed., *Creation, Catastrophe and Calvary* (Hagerstown, MD: Review and Herald, 2000), 159-171; and John T. Baldwin, "Progressive Creationism and Biblical Revelation: Some Theological Implications," *Journal of the Adventist Theological Society* 11 (2000), 174-187.

18. See, e.g., Gunkel, *Schöpfung und Chaos*; Childs, *Myth and Reality*, 31-50.

19. The framework hypothesis maintains that "the Bible's use of the seven-day week in its narration of the creation is a literary

(theological) framework and is not intended to indicate the chronology or duration of the acts of creation," Mark Ross, "The Framework Hypothesis: An Interpretation of Genesis 1:1- 2:3", in Joseph A. Pipa, Jr. and David W. Hall, eds., *Did God Create in Six Days?* (Taylors, SC: Southern Presbyterian, 1999), 113.

20. See, e.g., Conrad Hyers, *The Meaning of Creation: Genesis and Modern Science* (Atlanta, GA: John Knox, 1984). Larry G. Herr, "Genesis One in Historical-Critical Perspective," *Spectrum* 13/2 (Dec. 1982), 51-62, similarly separates between the cosmology (the ANE view of the universe) and the cosmogony (the theology of the writer) and suggests that "the chapter uses the common ancient Near Eastern cosmology in expressing what it takes to be the *theological* (or cosmogonic) truth," 61.

21. Terence E. Fretheim, "Were the Days of Creation Twenty-Four Hours Long? YES," in Ronald F. Youngblood, ed., *The Genesis Debate: Persistent Questions About Creation and the Flood* (Grand Rapids, MI: Baker, 1990) suggests, "It is probable that the material in this chapter [Genesis 1] had its origins in a liturgical celebration of the creation," 26.

22. There are two main "day-age" theories. A common evangelical symbolic interpretation, sometimes called the (broad) concordist theory, is that the seven days represent seven long ages, thus allowing for theistic evolution (although sometimes evolution is denied in favor of step-by-step divine creation acts throughout the long ages); see, e.g., Derek Kidner, *Genesis: An Introduction and Commentary*, Tyndale Old Testament Commentaries (Downers Grove, IL: InterVarsity Press, 1967), 54-58. Another position, the "progressive-creationist" view, regards the six days as literal days that each open a new creative period of indeterminate length; see Robert C. Newman and Herman J. Eckelmann Jr., *Genesis One and the Origin of the Earth* (Downers Grove, IL: InterVarsity Press, 1977), 64-65. The effect of both these "day-age" views is that the six days each represent much longer periods of time.

23. See, e.g., John C. L. Gibson, *Genesis*, Daily Study Bible (Edinburgh: Saint Andrew Press, 1981), 1:55-56.

24. According to the "visionary" view the six days are "days of revelation," a sequence of literal days on which God instructed Moses about Creation and not the six days of Creation itself; see P. J. Wiseman, *Creation Revealed in Six Days* (London: Marshall, Morgan, and Scott, 1948), 33-34, and Duane Garrett, *Rethinking Genesis: The Sources and Authority of the First Book of the Pentateuch* (Grand Rapids, MI: Baker, 1991), 192-194. This view was popularized in the nineteenth century by the Scottish geologist Hugh Miller (1802-1856).

25. This view has recently been advanced by John H. Walton, *The Lost World of Genesis One: Ancient Cosmology and the Origins Debate* (Downers Grove, IL: InterVarsity Press, 2009). According to Walton's interpretation, the Genesis account describes "a seven-day inauguration of the cosmic temple, setting up its functions for the benefit of humanity, with God dwelling in relationship with his creatures" (163). Even though Walton regards the days of Creation as six literal days, for him this creation is only "functional creation," i.e., assigning functions to the "cosmic temple." He argues that, like the ANE creation accounts, Genesis 1 says nothing about material creation and no passage in Scripture is concerned about the age of the earth, and thus we are free to accept theistic evolution as the means for God's material creation of the cosmos. Walton is not to be confused with the

scientist professor John Walton of the University of St. Andrews who contributes chapter 13 to the present volume.

26. Kenneth A. Mathews, *Genesis 1:1-11:26*, The New American Commentary (Broadman and Holman, 1996), 109. Gerhard Hasel also shows how the visionary view rests largely on mistranslating the word 'asah ("made") in Exodus 20:11 as "showed," a meaning that is not within the semantic range of this Hebrew word. Gerhard F. Hasel, "The 'Days' of Creation in Genesis 1: Literal 'Days' or Figurative Periods/EPOCHS of Time?" *Origins* 21/1(1994), 14, reprinted in John T. Baldwin, ed., *Creation, Catastrophe, and Calvary*, 48.

27. Fretheim in *The Genesis Debate*, 28. I do not concur with Fretheim's suggestion that the origins of Genesis 1 are in the cultus. Fretheim is apparently unduly influenced by von Rad and others who saw the Creation accounts as subservient to salvation history. The scholarly paradigm has recently shifted toward recognizing Creation theology in the Hebrew Bible as important in its own right and not to be subsumed under salvation history.

28. See Walter Kaiser, "The Literary Form of Genesis 1-11," in J. Barton, ed., *New Perspectives on the Old Testament* (Waco, TX: Word, 1970), 48-65.

29. Sailhamer, *Genesis Unbound*, 230-231.

30. *Ibid.*, 234-237.

31. *Ibid.*, 238.

32. *Ibid.*, 239.

33. *Ibid.*, 244.

34. See Jacques Doukhan, *The Genesis Creation Story: Its Literary Structure* (Berrien Springs, MI: Andrews University Press, 1978), 167-220, and Mathews, *Genesis*, 26-41, for detailed discussion.

35. Mathews, *Genesis*, 41.

36. *Ibid.*, 110-111.

37. In the 359 times outside Genesis 1 where *yôm* appears in the Old Testament with a number (i.e., a numerical adjective), it always has a literal meaning. Similarly, when used with a numbered series (as in Gen 1, Num 7, 29), *yôm* always refers to a normal day. Three alleged exceptions (Hos 6:2; Zech 3:9; 14:7) turn out upon closer inspection not to be exceptions to this rule. In these prophetic sections a *literal* day is applied in prophecy to a longer period of time; see discussion in Henry M. Morris, *Studies in the Bible and Science* (Philadelphia, PA: Presbyterian and Reformed, 1966), 36.

38. This is a major argument, not just of Seventh-day Adventists and other Saturday-Sabbath keepers; see, e.g., Fretheim, *The Genesis Debate*, 19-20, italics in original, "The references to the days of creation in Exodus 20:11 and 31:17 in connection with the Sabbath law make sense only if understood in terms of a normal seven-day week. It should be noted that the references to creation in Exodus are not used as an analogy – that is, your rest on the seventh day ought to be like God's rest in creation. It is, rather, stated in terms of the imitation of God or a divine precedent that is to be followed; God worked for six days and rested on the seventh, and therefore you should do the same. Unless there is exactitude of reference, the argument of Exodus does not work."

39. Hasel, "The 'Days' of Creation," *Origins* 21/1 (1994), 5-38; reprinted in Baldwin, ed., *Creation, Catastrophe, and Calvary*, 40-68; Fretheim, *Genesis Debate*, 12-35; James Stambaugh, "The Days of Creation: A Semantic Approach," *CEN Tech. J.* 5/1 (1991), 70-78.

40. Hasel, "The 'Days' of Creation," 62.

41. Stambaugh, "The Days of Creation," 75.

42. See ch. 9 of this volume by Dr. Steven Thompson, "The New Testament Use of the Genesis Text," and Henry Morris, *The Remarkable Birth of Planet Earth* (Minneapolis, MI: Bethany Fellowship, 1972), appendix B: "New Testament References to Genesis 1-11," 99-101.

43. See Gerhard F. Hasel, "The Polemic Nature of the Genesis Cosmology," *The Evangelical Quarterly* 46 (1974), 81-102 and "The Significance of the Cosmology in Genesis 1 in Relation to Ancient Near Eastern Parallels," *AUSS* 10 (1972): 1-20.

44. See Cassuto, *Commentary on Genesis*, 17, and Wenham, *Commentary: Genesis 1-15*, 6-7.

45. See Richard M. Davidson, "Cosmic Metanarrative for the Coming Millennium," *JATS* 11 (2000), 108-111 for the biblical evidence and secondary literature there cited. On the sanctuary imagery in the early chapters of Genesis, see chapter 5 of this volume by Dr. Laurence A. Turner, "A Theological Reading of Genesis 1".

46. Walton, in *Lost World of Genesis One*, insists that there is only "functional" and not material creation in the six days of Creation described in Genesis 1. However, his attempts to argue that the verbs for "create" and "make" have nonfunctional meaning in this chapter cannot stand up to close semantic scrutiny. According to the biblical text, God clearly materially created/made humans on the sixth day (Gen 1:26-27), as well as assigned functions to them (v. 28). For a thorough review and critique of Walton's proposed "cosmic temple inauguration" interpretation of Genesis 1, see the 2011 special issue of *Andrews University Seminary Studies*.

47. Alvin Plantinga, "Evolution, Neutrality, and Antecedent Probability: A Reply to McMullin and Van Till," in Robert T. Pennock, ed., *Intelligent Design Creationism and Its Critics: Philosophical, Theological, and Scientific Perspectives* (Cambridge, MA: MIT Press, 2001), 216-217.

48. Julius Wellhausen, *Prolegomena zur Geschichte Israels*, trans. Albert Wolters, (Berlin: de Gruyter, 1927), 296, cited in Plantinga, 216.

49. Gunkel, *Genesis*, trans. Albert Wolters, cited in Plantinga, 216. Note also Gunkel's statement regarding the days of Genesis 1: "the 'days' are of course days and nothing else." *Genesis*, 97.

50. James Barr, *Fundamentalism* (London: SCM Press, 1981), 40.

51. Barr, personal letter to David C. K. Watson, April 23, 1984, published in the *Newsletter* of the Creation Science Association of Ontario, vol. 3, no. 4 (1990/1991), cited by Plantinga in Pennock, ed., *Intelligent Design Creationism*, 217.

52. Von Rad, *Genesis*, 47.

53. Gerhard von Rad, "The Biblical Story of Creation", in *God at Work in Israel* (Philadelphia, PA: Fortress, 1984), 99.

54. *Ibid.*, 65.

55. See especially J. L. Duncan IV, and David W. Hall, "The 24-Hour View", in David G. Hagopian, ed., *The Genesis Debate: Three Views on the Days of Creation* (Mission Viejo, CA: Cruxpress, 2001), 47-52 for a survey of the history of interpretation, which "confirms that the cumulative testimony of the Church favoured normal creation days until the onslaught of certain scientific theories," 47.

56. John E. Hartley, *Genesis*, The New International Biblical Commentary (Peabody, MA: Hendrickson 2000), 52.

57. John Walton, *Genesis*, The NIV Application Commentary (Grand Rapids, MI: Zondervan, 2001), 81.

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58. See, e.g., Arthur Custance, *Without Form and Void* (Brockville, Canada: by the author, 1970); the *Scofield Reference Bible* (1917, 1967); and Jack W. Provonsa, "The Creation/Evolution Debate in the Light of the Great Controversy Between Christ and Satan," in James L. Hayward, ed., *Creation Reconsidered* 10-311.

59. *Gesenius' Hebrew Grammar*, eds. E. Kautzsch and A. E. Cowley (Oxford: Clarendon Press, 1974), 454 (par. 141 i). For analysis and refutation of the "ruin-restoration" theory both on philological and theological grounds, with particular focus upon the grammatical impossibility of this view's interpretation of Genesis 1:2, see especially W. W. Fields, *Unformed and Unfilled: A Critique of the Gap Theory of Genesis 1:1, 2* (Winona Lake, IN: Light and Life, 1973).

60. For a list (with bibliographical references) of major supporters, see especially Hasel, "Recent Translations," 163, and Bruce Waltke, "The Creation Account in Genesis 1:1-3, part III," in *Bibliotheca Sacra* 132 (1975), 216-217.

61. See, e.g., Henry Morris, *The Biblical Basis for Modern Science* (Grand Rapids, MI: Baker, 1984) and *The Genesis Record* (Grand Rapids, MI: Baker, 1976), 17-104.

62. See, e.g., Harold G. Coffin, *Origin by Design* (Hagerstown, MD: Review and Herald, 1983), 292-293, who allows for this possibility.

63. Hartley, *Genesis*, 41.

64. Sailhamer, *Genesis Unbound*, 38. Sailhamer refers to other biblical examples of this usage of the word *ršit* (e.g., Jer 28:1) and contrasts it with other Hebrew words for "beginning" that refer specifically to a beginning point of time, 38-44.

65. I take the Hebrew word *hā'āre*, "the earth," in Genesis 1:2 to refer to our entire globe and not just to the localized land of promise for Israel as Sailhamer interprets it.

66. I deliberately avoid using the word "chaos" to describe this condition of the planet before Creation week. Some have claimed that the terms *tohū-bohū* refer to a "chaotic, unorganized universe."

But the careful study of these terms by David Toshio Tsumura, *The Earth and the Waters in Genesis 1 and 2: A Linguistic Study*, JSOT Supplementary Series, 83 (Sheffield: JSOT Press, 1989), especially 155-156, shows that these terms refer not to chaos, but to a state of "unproductiveness and emptiness" in Genesis 1:2.

67. Marco T. Terreros, "What is an Adventist? Someone Who Upholds Creation," *JATS* 7/2 (Autumn 1996), 147-149, summarizes some of the major philosophical/theological arguments that could be raised against the passive gap view, although not himself necessarily adopting these arguments.

68. For comparison with ANE genealogies, see, e.g., Gerhard F. Hasel, "The Genealogies of Gen 5 and 11 and their Alleged Babylonian Background," *AUSS* 16 (1978), 361-374, and Richard S. Hess, "The Genealogies of Genesis 1-11 and Comparative Literature," in Richard S. Hess and David Toshio Tsumura, eds., *I Studied Inscriptions Before the Flood: Ancient Near Eastern, Literary, and Linguistic Approaches to Genesis 1-11* (Winona Lake, IN: Eisenbrauns, 1994), 58-72.

69. Hess, "Genealogies of Genesis 1-11," *ibid*.

70. I do acknowledge the possibility of minor gaps (or duplications) in Genesis 5 and 11, due to such factors as scribal omissions or additions. An example is the mention of a second Canaan in the LXX of Genesis 5 and in Luke 3, as opposed to only one Canaan in the Masoretic Text.

71. *Hifil* and *Qal* are forms of Hebrew verbs.

72. This is contra, e.g., Cottrell in *Creation Reconsidered*, 203 and Lawrence Geraty, "The Genealogies as an Index of Time," *Spectrum* 6 (1974), 5-18, who both fail to recognize the differences between the other genealogies of the Bible and other ANE literature, on one hand, and the unique chronogenealogies of Genesis 5 and 11 on the other.

73. See "The Chronology of Early Bible History," *Seventh-day Adventist Bible Commentary* (1953), 1:174-196. For the date of the Exodus as c. 1450 BC, see especially William Shea, "Exodus, Date of," *International Standard Bible Encyclopedia* (1982), 2:230-238.

Chapter 8

BIBLICAL THEOLOGY AND THE DOCTRINE OF CREATION

Paul B. Petersen

To the ordinary reader of the Bible, the opening account of Creation leaves an overwhelming and majestic impression, and it is almost impossible to continue reading any part of the biblical canon without this grand beginning in mind. Obviously, any biblically based theology will need to incorporate the concept of Creation as an essential part of its structure.

Many contemporary biblical scholars recognize that Genesis is foundational to the rest of the Bible and to biblical theology itself. Andrew Reid describes Genesis as “a start waiting for a finish, a beginning waiting for an end” and explains:

It tells us of a Creator and of his plan for redemption. It sets an agenda, outlines the issues, graphically gives them human form, and proposes a solution, but never quite gets to its end. It therefore thoroughly prepares the Christian [reader] for Christ and enriches our understanding of his work and God’s great purpose.¹

James McKeown is even more specific stating that many of the themes and characters of Genesis “are found throughout both Old and New Testaments,” concluding that “Genesis is in microcosm a sourcebook for biblical theology.”²

However, while the concept of Creation is understood by many to be an underlying theological premise of all Scripture, specific references to the first chapters of Genesis may seem surprisingly scarce throughout the Bible. This fact has led critical observers to various conclusions, among them that the Creation account(s) may be a late addition to the main body of the Hebrew Bible,³ and/or that its specific, detailed content is less relevant for the theology of the biblical authors in general. While there may be general agreement that the concept of Creation plays a significant role in a biblically based theology (it is after all historically understood this way, and Creation found its way into all major creeds of Christianity), it has become popular to downgrade the significance of the specific details of the how and when of Creation for such a theology, thus creating a dualism between concept and reality.⁴

In my view, such conclusions fail to grasp important aspects of the way the authors of the Bible speak throughout about God and Creation. A truly biblical theology of Creation cannot be separated from the reality of the act(s) of creating, and any theology that the particulars of the biblical revelation in respect of Creation.

In this chapter I intend to sketch a biblical theology with an emphasis on the role of Creation, and will do so by taking some of the biblical references to the opening chapters of Genesis as the

starting point for the major aspects of such a theology. While the approach is thus systematic, the aim in this process is also to highlight the significance of detail in the biblical Creation account, seeking to throw some light on what the biblical references to Genesis 1 and 2 imply theologically regarding the realistic, or factual, nature of the Creation account.⁵

Space limitations prevent a fully developed systematic theology, so this study will cover only five essential aspects of biblical theology: the nature of God as transcendent, God as immanent, anthropology, history and eschatology, the last two elements to be considered together.

Defining God as Transcendent*

The Creation account in the first two chapters of Genesis presents two aspects of the nature and being of God for which theologians often use the terms “transcendent” and “immanent.” On the one hand, God is, as in Genesis 1, the distant, transcendent, totally “other” Being who by his word speaks the world into existence. On the other hand, God is, in the second part of the Creation account from 2:4b-25, described as the God who comes close to his creation, who is immanent, with us, who forms humans from the soil of the earth and who kisses Adam into existence by blowing his spirit into his nostrils (Gen 2:7).⁶

Later biblical references to Creation frequently underline the transcendence of God, as can clearly be seen, for example, in the book of Acts. At two strategically and theologically significant points Acts, by quoting the fourth commandment, describes God as the one “who made the heaven and the earth and the sea and everything in them” (Acts 4:24; 14:15).⁷ The two occasions are a prayer and a sermon, and both prayer and preaching feature significantly in the record of Acts.

The first event is a prayer in connection with the only recorded New Testament early church worship service (Acts 4:24-30) and the second reference is found in the first recorded apostolic sermon in Acts preached to a non-Jewish, Gentile audience, namely Paul’s speech in Lystra (Acts 14:15-17). These occasions thus highlight two central aspects of the life of the church – worship and evangelism, and these Creation references testify to the universal, transcendent, nature of the Christian God as well as to the inclusiveness of the Christian mission to the world.⁸

The phrase used in Acts is not a reference to the opening line of Genesis 1:1, which is a merism,⁹ a literary device where two opposites are employed to express totality.¹⁰ Rather, Acts directly quotes from the fourth commandment in Exodus 20:11, which explicitly expresses belief in the literal Creation week of Genesis 1 and 2.¹¹ The description of God in the invocation of the prayer – “Sovereign God, who made . . .” (Acts 4:24) – highlights the nature of the Creator God whom the early Christians worshiped. The repetition of the quotation in the sermon at Lystra underlines the continuity of the core Christian message when moving from the Jewish to the Gentile context. The God whom the apostles preached when reaching into the Hellenistic world with the gospel message (v. 15) is the same universal God whom also Jewish Christians worshiped as the Creator of everything and everyone.¹²

The traditional Greco-Roman culture viewed the world as eternal and gods as beings with a definite beginning. In comparison, the concept of God as a totally independent and self-existing being who created the world out of nothing was unique to the Hebrew heritage of the Christian

* From the Latin *transcendo*, “to go beyond, surpass,” therefore of God: the One who is by nature above and beyond all other beings, and all things.

church. From a broader historical and systematic theological perspective this understanding has been and still is a contrast to the number of “isms” of the past and present, including paganism in general, materialism, humanism and secularism.

The creation of everything by the word implies creation out of nothing, *ex nihilo*, and it underlines the transcendence of God.¹³ Both the psalmist in Psalm 33:6-9 and the gospel writer in John 1:1-3 explicitly refer to Genesis 1 and creation by the word of God, and texts such as 1 Corinthians 8:4-6 and Colossians 1:15-17 evidently presuppose the concept by speaking about the creation of everything through Christ. Not least is the 1 Corinthians passage relevant in this context because it contrasts the God of the Old Testament with the pagan gods of the Greek and Roman pantheon,¹⁴ gods which have “no real existence.” The biblical God, however, is the Creator of everything.

As such, a being independent of all matter, eternal, omnipotent and omniscient, God cannot be absolutely identified with any specific place on earth, including the sanctuary. It and the later old covenant center of the temple in Jerusalem were but shadows of the heavenly reality. At first the apostolic church clashed with Judaism on that point, as is clear from the sermon by Stephen recorded in Acts 7:44, 48-49. The conflict was not simply about the right to worship God everywhere. In a broad sense Jews already did that, as confirmed throughout Acts (see, for instance, Acts 15:21; 17:1). Rather the issue centered on the sacrificial aspect of the temple worship that Stephen, just like Christ shortly before, is accused of aiming to set aside (Acts 6:13-14). In response to this legal accusation Stephen justifies his position by bringing the required two or three witnesses (Deut 19:15). They are the best possible: Moses, Solomon and Isaiah – that is, the Law, the Writings and the Prophets. He refers first to the inauguration of the tabernacle in the time of Moses (Acts 7:44-45; cf. Exod 25:40), and next to the establishment of the temple service in the time of Solomon, this by way of the prophet Isaiah (Acts 7:48-49; cf. Isa 66:1) who himself quotes the inaugural prayer by Solomon in 1 Kings 8:27-28. In their original contexts in Exodus and 1 Kings both these texts underlined that the earthly sanctuary is but a shadow of the heavenly reality.

Stephen thus points to heaven, with its archetypal sanctuary, now inaugurated by Christ through his sacrifice on Calvary, as the only true holy place. His final word directed to the Sanhedrin is the last straw, cementing their rage, as he sees heaven opened and Jesus at God’s right hand and testifies to Christ’s exaltation as heavenly High Priest (Acts 7:56).¹⁵ From now on there is only one truly holy place and it is not on earth. This theological perspective also quickly brought the early church on a collision course with the Hellenistic, pagan world that the first Christians encountered – as it does still today when the church faces various other religions or movements like the New Age for which specific places on earth may be power centers or holy in themselves.

God’s independence of the created world, his *ex nihilo* creation from a transcendent status beyond that which is earthly and creaturely, implies that no earthly space is holy in itself. It also implies that this transcendent God can only be known through his self-revelation. That process discloses that, instead of a holy place, he has chosen to set aside holy time, a “palace in time,”¹⁶ the weekly Sabbath, as the locus of worship. The two quotations in Acts from the fourth commandment in Exodus 20 thus implicitly underline the function of the Sabbath, the specified memorial of Creation, as a symbol that the God we worship is the God of the universe who created all out of nothing. This is the main theological reason that it becomes a natural outreach point for mission to the pagan world to quote from the fourth commandment as Paul does in Acts 14:15 when speaking

to a Gentile audience. It emphasizes the transcendence, the uniqueness, of the Creator God Paul wishes his Gentile hearers to recognize and worship.

But this symbol only carries significance by its specific nature. It is by meeting humans on a *specific, particular* day that God is worshiped as the Creator God who is known only by his self-revelation.¹⁷ As argued elsewhere in this book and as indicated throughout the entire Bible, this concept of revelation is all essential for the divine-human dialogue. God is first known by his specific, concrete intervention. History comes before philosophy. In prayer, specific thanksgiving leads to general praise. In praise, we worship God for what he always is – but we have come to realize and believe that he is so because in specific history he has shown himself to be what he is. So, the worship of God on the specific time of the Sabbath day underlines the historical revelation and intervention by God and presupposes by its specific nature the Creation account in Genesis.

Revealing God as Immanent*

While underlining the transcendence of God, biblical references to Creation also point to his immanence, his closeness to created humanity. One of the clearest illustrations of this is found in Paul's epistle to the Romans. In Romans 5 Paul makes a comparison between Jesus and the first human being, Adam, making specific reference to the Genesis Creation account in describing the role of Jesus as the second Adam. Whatever the meaning is of the much discussed dependent clause that ends verse 12,¹⁸ it is evident that Paul believed enough in the Genesis account to make it clear that Adam and sin were both real, and that death entered the world as a result of Adam's sin. There is little room for long time epochs with death existing before sin.¹⁹

However, in the technical discussion of this verse it is at times overlooked that it is written in the context of the story of redemption. The *therefore* of verse 12 (*dia touto*) points back to the drama of salvation presented by Paul in Romans 5:1-11 where he tells how while still enemies, we were reconciled to God by the death of his Son (Rom 5:10).²⁰ Paul's specific reference to the first human being, Adam, and his fall into sin, is, in his thinking, part of the great historic battle between good and evil.

The meticulous Greek scholar R. C. H. Lenski says of this entire passage of Romans 5:1-11, "There is not a 'we' in the whole paragraph – all is objective, all is historical." He then adds, "We see that Paul is a theologian of fact," one "who sees all the facts and especially the basic facts which escape superficial theologians and those who theorise and philosophise." Adam is fact. Adam's sin is fact. "Adam's sin killed our entire race," Lenski says. The historical facts of Christ's intervention flow from the historical facts of Creation and the Fall. It is impossible to avoid the conclusion that Paul regards the Genesis record as historical reality.²¹

In Christ God is, consequently, historically present as a person. This thought resonates with other statements by Paul and other New Testament writers, such as "in Christ God was reconciling the world to himself" (2 Cor 5:19). Christ was the Creator (John 1:3; Col 1:15; Rev 3:14), but he is the Creator who became a human being, the Word who became flesh (John 1:14), the Shepherd who became a Lamb (John 10; Rev 7:17). The Incarnation is the indispensable cornerstone of Christian theology, in very essence affirming God's immanence, "God with us" in the words of the angelic proclamation at the birth of Christ (Matt 1:23).

* From the Latin *in + manere*, to remain or stay, therefore of God: the One who, although transcendent, yet remains or stays with his creation: God's nearness or his presence.

The theological context of Paul's reference to Adam is not a philosophical reflection on the ontological nature of either God or man; it is the historical revelation of God himself in Christ. As always, the starting point for our divine-human dialogue is God's specific intervention and self-disclosure. He is not only transcendent, he is also immanent. He has not only revealed something about himself, as for instance in Islam Muhammad is believed to have revealed something from Allah. In Christ God has become a human being, now genuinely known to us as a person. He revealed *himself*.

This historical context provides the all-essential perspective for the development of Christian teaching. It is the basis for the doctrine of the atonement and the doctrine of the Trinity.²² It lends depth and meaning to the New Testament concept of *agape* love according to which the One who owns everything in the universe sacrifices himself for undeserving sinners, dying for the helpless. It forms the basis for Christian ethics in the midst of our present cultural environment dominated by the evolutionary concept of "the survival of the fittest." So, Paul's very specific belief in the historicity of Adam and the Fall is to him part of the divine drama of salvation, the story of redemption, basic and inseparable elements of which are Creation, the Fall and Calvary.

Anthropology and Lifestyle

From a theological standpoint anthropology (Greek *anthropos*: "man, mankind") refers to the biblical understanding of humankind and human nature and therefore consequently to the manner in which humans are to live their lives in the sight of a transcendent and immanent God.

Human nature. In a dialogue with the Pharisees recorded in the Gospel of Matthew Jesus quotes the Genesis account as an authority in regard to the proper understanding of marriage, "He answered, 'Have you not read that he who created them from the beginning made them male and female, and said, "Therefore a man shall leave his father and his mother and hold fast to his wife, and they shall become one flesh"? So they are no longer two but one flesh. What therefore God has joined together, let not man separate' " (Matt 19:4-6). The reference to Genesis 2:24 is unambiguous, the confidence of Jesus and the Gospel writer in its veracity unquestionable.²³

It makes little sense, therefore, to advise people to live their practical family lives in accordance with, and on the basis of, Genesis 1 and 2 if human sexuality was not created but evolved, since actual human nature in that case would differ dramatically from that set forth in the first chapters of the Bible and assumed and confirmed by the words of Jesus in Matthew 19.

This is so much more obvious because the anthropology of the Creation account demonstrably permeates the views of the biblical authors in general. It is not simply a minority view put forward in one or two texts, but rather the theological premise for the way the Bible throughout speaks about human beings and their existence. Human existence is concrete, it is specific; it is always also physical. The dualistic notion of a nonmaterial entity that is able to live and exist independent of the body is foreign to any biblical author.²⁴ Humans are created beings, mortal and dependent – not inherently immortal. God is immanent, but he also is the Creator, an independent being outside and beyond creation, not immanent in the sense of being an impersonal force inside human bodies, as in pantheism. The center that unites a human being into wholeness and harmony and that provides final identity is not found within, but outside of us.²⁵ This is one of the underlying and essential theological truths of the opening chapters of Genesis.

It is by acknowledging this eternal Creator God who is outside of me that I as a human reach and maintain any genuine humanity. This also becomes clear from a thoughtful reading of Genesis 1 and 2. Humans were created to live in a dependent relationship with the immanent God who in person communicated with the first created humans. The Bible underscores that whenever humans in their ambition to live forever take upon themselves the role of God, yielding to the snakelike temptation to be “like God” (Gen 3:5), they stop being human and may even become more bestial than human. In the book of Daniel, King Nebuchadnezzar of Babylon very well illustrates this general biblical truth (cf. Dan 4: 7).²⁶ Humanness consists of being what God created us to be, distinct from God, dependent on him, but not divine. Similarly, human holiness does not consist in becoming divine, but in being sanctified to (and by) the One who alone is holy in himself.²⁷

So, in presenting God’s ideal for the sexual relationship between man and woman, Jesus assumes and applies the Creation account of Genesis 1 and 2. But the continuation of the dialogue in Matthew 19 reveals that Jesus also acknowledges the reality of the Fall. When questioned about the laws for divorce, Jesus answered, “Because of your hardness of heart Moses allowed you to divorce your wives, but from the beginning it was not so” (Matt 19:8). We no longer live in the originally perfect world.

Presupposing the Fall, Jesus recognizes the fact that human lives are broken. The harmony and wholeness intended by God for both personal and corporate human existence is no longer a reality and humanity needs divine intervention, revelation and guidance to bring order to our chaotic world. The principles apply to all aspects of human existence. Referring to Christian lifestyle, sometimes known in classic theological terminology as “sanctification,” one writer perceptively observes that sanctification is “the eager pursuit of holiness in the midst of an unholy world, the positive alternative to secularism, the attitude of a world turning away from God.”²⁸ It is anthropology worked out at the practical level, flowing directly from the implications of Genesis 1 and 2.

Law and Wisdom: Bringing Order to the World. Law and Wisdom are the two major types of text in the Old Testament that advise humans on how to organize their lives in a broken world. The clear framework for both is the concept of divine Creation.

The ordering of the world is a main issue in biblical wisdom literature, just as it is for the corresponding literature in the broader historical and cultural environment of the ancient Near East. Creation is thus mentioned explicitly in many places in hymnic and wisdom literature, such as in Ecclesiastes 12:1ff.; Psalms 8; 19; Job 38-40 and in Psalm 33:6-9, which contains a clear and strong emphasis on creation out of nothing but the word.²⁹

A closer reading of some of these texts has revealed how the specifics of the Creation account in Genesis form the background for the theological message they contain. Jacques Doukhan has, for instance, detected a literary usage of the sequence of the seven-day Creation week in Job 38-40,³⁰ and several scholars have noticed the explicit reference in Psalm 19 to God’s work in creation and law (vv. 1-6, 7-11), followed by the event of the Fall, the “great sin” of verse 13b,³¹ the presumptuous sin (v. 13a) of humans presuming to be godlike by yielding to the snakelike temptation in Eden (Gen 3:5-6).

While Creation is explicit in many Wisdom texts, it may at first not be as clearly present in the legal body of the Pentateuch. Yet while many of the laws here apparently have no explicit explanation, it should not be overlooked that the theological perspective of the legal corpus is found in the narrative context of Genesis, and a closer reading of these reveals an unambiguous connection.

In the New Testament, Paul provides one example of such a link between Genesis and the remainder of the Pentateuch. He finds the rationale for his understanding of the relationship between promise and law in the narratives about Abraham in Genesis (see Gal 3:15-29; *cf.* Rom 4:1-12). His hermeneutic is not simply a rabbinic device without significance for our reading of the text. It is still valid. When we reflect on the meaning of tithing, for instance, its theological purpose is not stated in the legal codes themselves, but exemplified in two Genesis narratives about Abraham and Jacob in which Creation, not least in connection with Abraham, plays a major role (Gen 14:17-24; 28:18-22). Similarly, the significance of the sacrificial system has to be understood on the basis of major narratives in Genesis: on the one hand, the Creation-Fall accounts and the subsequent sacrifices (*cf.* Gen 4:1-7); on the other hand, the '*Aqedah*, the story of Abraham's journey to Mount Moriah to sacrifice his only son Isaac (Gen 22:1-19). These events lend theological meaning to the notion of sacrifice, and the ceremonial system presented at times in somewhat technical terminology from Exodus to Deuteronomy is to be read and understood against that background.

Jiri Moskala has convincingly shown how the laws regarding clean and unclean food in Leviticus are closely structured with a view to the Creation account in Genesis. So, even during the less than ideal period after the Fall, Creation still outlines specifics in relation to the way in which human life should be lived.³² Careful reading of Leviticus 11 clearly indicates presupposition of the specifics of Creation, and the vocabulary and imagery of Leviticus 11:41-46 clearly reflect the vocabulary and imagery of Genesis 1:20-24. The ordering of the world so typical for Wisdom literature is also one of the most conspicuous features of the account in Genesis 1, and the literary style is reflected in the priestly and Levitical codes God revealed to Moses – the order stems from the same mind, that of the Creator.

This practical ordering of human life is presented in both Law and Wisdom writings within the framework of Creation, with implicit references also to the account in Genesis. Such ordering also presupposes by its very nature the veracity of details in the Creation account. To follow practical advice for the daily living out of our existence as created beings, such as diet, makes little sense if the specifics of that act of creation never took place.

History: Creating Hope in Chaos

The divine purpose as revealed in the original act of creation has not yet been fully realized. Yet God's original intention strengthens our hope in the midst of a chaotic world.³³

Of the various strands of biblical imagery and theological themes, which are intertwined to cast the vision of the world to come in the book of Revelation, the most significant may be the motif of the restored and regained Paradise.³⁴ Revelation 22:2 contains an explicit reference to the "tree of life" from the Garden or Paradise of Eden. In the literary context of the book this reference is best understood by the emphasis it gives to the concept of Creation.

The fact of Creation plays a decisive role at significant moments during the unfolding of the apocalyptic drama. Jesus is presented to the last of the seven churches as the origin or "ruler" of creation (Rev 3:14, NIV); the message to be proclaimed to the world before the second coming of Jesus contains a strong appeal to worship the Creator (Rev 10:6-7; 14:6-7); and when the battle is over, God's voice is heard, proclaiming with specific reference to the old, marred creation, "Behold,

I am making all things new" (Rev 21:5). While the description in the final chapters of Revelation is far from naturalistic, the reference to the "tree of life" connects it to the Genesis account of the first created human home and underlines the specific nature of the hope of Christ's redeemed saints. The new existence will be real because it restores the reality of man's original existence.

The thought that human hope for the future is based on God's power to totally re-create the world and establish a new order is of course not unique to the apocalyptic literature of the Bible. Books like Daniel and Revelation may rightly be seen, not as a contrast to the so-called classical prophets, but rather to expand on the eschatological hope that permeates their books, too. The prophet Isaiah also spoke about the future Messianic kingdom in imagery that breaks the natural order of the world as we know it. Only the omnipotent God, independent of all creation, is able to create a reality where "the wolf shall dwell with the lamb, and the leopard shall lie down with the young goat, and the calf and the lion and the fattened calf together; and a little child shall lead them. The cow and the bear shall graze; their young shall lie down together; and the lion shall eat straw like the ox" (Isa 11:6-7).

Later in Isaiah the concept of the original creation forms the basis for confidence in Yahweh's ability to predict and control the future. In Isaiah 45:18-19 the prophet speaks about the original creation with a clear reference to the Genesis account,³⁵ and he expands on the concept of God as the One who creates out of nothing by speaking in verses 20 and onwards about Yahweh as the Lord of history who is able to foretell what is going to happen. He is a God who is able to form the nothingness of the wasteland into order, in both space and time, as Master of Creation and Lord of past and future history.

Seen in the broader biblical perspective, the eschatological hope of the final intervention by the Creator God provides the fourth and last of the major elements in the drama of salvation, adding the second coming of Jesus and the "universal restoration" (Acts 3:21) to the three elements of Creation, the Fall and Calvary.

It would be a mistake to read the biblical testimony as if this idea of history moving towards a goal is limited only to certain parts of the Bible, to certain literature genres like prophecy and apocalyptic, and maybe now and then extended to the historical works. Hymnic and Wisdom literature likewise presuppose this link between the drama of history and the hope of a new creation. It is reflected, for instance, in a song like Psalm 46. God's power as Creator and Sovereign over the elements of nature (vv. 1-3) equals his power in history and his divine providence in leading human affairs (vv. 4-11). The psalm deliberately employs similar terms to describe the realms of creation and history, thereby connecting the concept of God as Creator with the trust in his providence in history. The seas are in uproar or rage (v. 3, from Hebrew *hamah*); so are the nations (v. 6, also *hamah*). The mountains totter (v. 3, from Hebrew *mot*), so do the kingdoms (v. 6, also *mot*).

In this psalm the act of creation thus becomes the guarantee that God's promises for the future will be realized and the tragedy of human history turned around. This is also how the human king on the Davidic throne in all his evident imperfection can nevertheless be presented, especially in the royal psalms, as a type of the Messiah to come, the Messiah *par excellence*, Jesus Christ (cf. Psalms like 2; 89). Something better is on its way, when eschatology becomes the final fulfillment of history.

For the Pentateuch as a whole the relationship between divine word and human reality is far more significant than often noted. It is widely recognized that the theme of promise and fulfillment is central to Genesis.³⁶ This is closely related to the concept of Creation; the promise is the Word

by which God creates what is to come. But the importance of the Word is highlighted in more than one way throughout the Pentateuch. The material is generally ordered to make the Word of God preminent. Promise precedes fulfillment. Laws are given before the events they are to commemorate take place, as when Passover rituals are shared with Moses and Aaron before the slaying of the firstborn and the actual Exodus (Exod 12:1-20; 43-50). Detailed description of how to build the tabernacle and the furnishings are presented in the narrative (Exod 25-30) before the actual building takes place. Moses is punished for using his rod, not the word, the power of which would have shown the holiness of God (Num 20:6-13). Words of blessings and curses point to the future options for God's people (Deut 28-29). The significance of the Word of God runs through all the Pentateuch. It is through his Word that God is present and accompanies and leads the people towards the land of promise, as emphasized in the verse from Deuteronomy quoted by the apostle Paul, "But the word is very near you. It is in your mouth and in your heart, so that you can do it" (Deut 30:14; cf. Rom 10:8).

Here, as in the original creation, the Word precedes the reality. The Word of God thus guarantees the reality of the future to come. Creation becomes the theological basis for restoration and re-creation.

But this use of the Creation motif is not simply general. The eschatological hope is described in terms that remind us of the Genesis Creation account where reality was spoken into being by the Word of God (Psa 33:6-9; John 1:1-3), and the specificity of its ultimate realization in Paradise reflects the concrete nature of that account. Thus, the Genesis scholar Derek Kidner can perceptively say that "Genesis is in various ways almost nearer the New Testament than the Old, and some of its topics are barely heard again till their implications can fully emerge in the gospel." He then concludes:

Finally there is the symmetry by which some of the very scenes and figures of the earliest chapters reappear in the book of Revelation, where Babel (Babylon) and "that ancient serpent, the deceiver of the whole world" come to their downfall, and the redeemed, though now veterans rather than untried innocents, walk again in Paradise by the river and tree of life.³⁷

History and eschatology come together at the end and they do so, in no small measure, on the basis of the details in the Genesis Creation account.

Summary Reflections

In this brief chapter I have made an attempt to sketch the contours of a biblical theology grounded in the Genesis Creation account and with specific reference to the details of that account.

Creation, the Fall, the cross and the second coming and re-creation join to form an outline overview of the history of salvation. This metanarrative of the biblical canon is foundational to all Christian teaching, including the appearance and elimination of sin, redemption, the atonement and the Trinity. It is based on the unique Judeo-Christian understanding of the nature of God. He is the Creator and as such eternal, independent of all created matter, omnipotent and omniscient. This concept of God is implied by the notion of creation *ex nihilo*, creation out of nothing, and it is presented or assumed in many places in the Bible, not least in its opening words, "In the beginning God created the heavens and the earth" (Gen 1:1).

That the Creation motif is essential to any Christian and biblically based theology is, therefore, uncontested. To what degree and in what way such a theology presupposes and demands the veracity of the details of the Genesis Creation account is not. Two reflections regarding the concept of *ex nihilo* creation in my view help towards an answer to that question.

First, I find realism inherent in the very concept of creation. To keep creation on an abstract level of thought is simply contrary to the very idea. By nature creation implies reality.³⁸ The dualism between concept and reality is not compatible with the biblical notion of Creation, and it makes little sense to speak about creation without acknowledging that someone at a certain point in time created something. Biblical theology is here as elsewhere built on concrete reality. From a pastoral perspective it is inconsistent, maybe even unethical, to advise and expect anyone to live according to the Creation model for human sexuality and interpersonal relations if our human passions and longings are formed and decided by completely different realities.

It is certainly true that the biblical description in Genesis is neither naturalistic nor intended to answer our present culture's specific questions arising from science and knowledge. Yet it is quite evident, as is the assessment almost unanimously agreed by critical scholars,³⁹ that the readers of the original text would have understood the account as describing what was believed to have actually happened. Likewise it is obvious that New Testament authors like Matthew, Luke and Paul took the historicity and the veracity of the accounts about Adam and Eve for granted. Today's apparent problem was not their problem.

The question is sometimes raised why the biblical authors did not speak more about the details of the Creation in Genesis 1-2. As evidenced above, they may actually have spoken and thought more about the details of that account than is often assumed or conceded. The use of literary motifs and features from Genesis 1-2 show up in the various genres of biblical literature, the laws of the Pentateuch, in hymns and Wisdom, as in the book of Job, in apocalyptic literature; the notion of Adam and Eve as real persons is clearly present in both the Gospels and epistles of the New Testament. We might also rightly ask why the biblical authors would be supposed to make such specific references? Let me for reflection use an analogy. I suggest that if we conducted a survey of topics preached and taught by a number of conservative or fundamentalist Christians who firmly believe in a literal seven-day week Creation, we might not find many actual references, if any, to the specific details of Creation on days two, three, four or five. Similarly, the content matter of a large proportion of the biblical material would not naturally lead the authors to affirm or explicitly mention details of the various days of the Creation week, even though they may have both known and believed them to be true. I question that their supposed silence can be used as a serious argument against the biblical authors' knowledge about or belief in the Genesis account.

With that I am led to my second major reflection regarding the *ex nihilo* concept of creation. I have used the terms "realism," "veracity" and even "historicity" about the Genesis Creation account and have emphasized that realism is embedded in the concept of creation. But it must also be pointed out that the very concept of creation out of nothing implies that we move beyond mere history. In one sense there are no historical accounts of Creation – no humans were present. If the biblical account in Genesis is seen simply as historical material, we will come to assess its qualities and analyze its style and content exclusively from a comparative angle. In that case we will have begun treating it like the text from any other book and we will by our very method have excluded the

concept of God, which the Bible itself presupposes, namely the Creator God who can be known only through his self-revelation.

There is little doubt, as is generally accepted by all Bible scholars, conservatives among them, that the Genesis account was written in a cultural context. It is polemical; it addresses issues of relevance for its time; it reflects thorough acquaintance with Mesopotamian and Egyptian culture and mythology; in short, it is evidently culturally directed. But it is relevant in its culture exactly because it is a divine revelation to that culture. This revelation speaks in the cultural language of its day and employs genres and stylistic features that the reader of the day was able to comprehend. Any analysis of the biblical text will have to take that into consideration. Yet, as divine revelation it speaks truthfully and with an authority far beyond the limitations of the prevailing culture because its ultimate source is the Creator God who is independent of culture, but able, willing and wanting to reveal himself to all cultures.

In short, if the Creation account in Genesis 1-2 is to give any meaning within the context of a biblical theology, it has to be viewed as part of the revelation from God. Humans have no way of knowing what happened at Creation, except through revelation. Only God can make it known. Within the framework of a biblical theology we confess that he has done so.

We have seen that throughout the Bible we consistently find testimonies that underscore the significance also of the specifics of Creation. The Creation account of Genesis 1-2 contains particulars that are practical and relevant for both our worship of God and our personal identity and corporate existence, such as the Sabbath, lifestyle, family and sexuality. The biblical references to these aspects of life must also all be understood as part of the divine revelation. This biblical witness is God's way of communicating what he wants us to know.

NOTES AND REFERENCES

1. Andrew Reid, *Salvation Begins: Reading Genesis Today* (Sydney, Australia: Aquila Press, 2000), xii.
2. James McKeown, *Genesis* (Grand Rapids, MI and Cambridge, UK: William B. Eerdmans, 2008), 375.
3. "Many scholars have taken the infrequent references to creation early in the history of Israel as evidence that the idea of God's creation of the world came rather late to their attention," says William Dyrness in *Themes in Old Testament Theology* (Exeter, UK: Paternoster Press: 1979), 63; cf. the discussion by Brevard S. Childs regarding the views of Gerhard von Rad that Creation is a subordinate theme in the Old Testament with respect to redemption, *Old Testament Theology in a Canonical Context* (Philadelphia, PA: Fortress Press, 1985), 32-34.
4. For an informed and very intelligently written discussion of the Creation narratives, which in the end in my view accepts such a dualism, see Hans Schwarz, *Creation* (Grand Rapids, MI: Eerdmans, 2002), especially 169-175.
5. Discussion of the origin and date of Genesis 1-2 is outside the range of this article.
6. In comparison with the biblical account of God and Creation, the Qur'an noticeably emphasizes the transcendence of God. Allah speaks the world into existence in six days, but he then remains distant. For this observation, see John Kaltner, *Introducing the Qur'an* (Minneapolis, MN: Fortress Press, 2011), 48-49.
7. When not otherwise stated, quotations from the Bible in this article are from the *English Standard Version* (ESV).
8. The significance of the sermons in Acts is generally recognized, cf. Mikeal C. Parsons, *Acts*, Paideia Commentary (Grand Rapids, MI: Baker Book House, 2008), 8-10, and for more detail Marion L. Soards, *The Speeches in Acts: Their Content, Context, and Concerns* (Louisville, KY: Westminster/John Knox, 1994). The prayers have received less attention. François Bovon provides a helpful overview of literature up to 1975 with regard to prayer in the theology of Luke, *Luke the Theologian: Fifty-Five Years of Research (1950-2005)* 2nd edn. (Waco, TX: Baylor University Press, 2006), 453-457. The major work is the valid, but now somewhat dated study by Oscar Harris, "Prayer in Luke-Acts: A Study in the Theology of Luke" (PhD dissertation, Vanderbilt University, 1966).
9. Other biblical examples may include the "heaven" and "earth" in Isa 1:2 and Hab 3:3 and "the highest" and "earth" in Luke 2:14. In both cases the implication is "everyone, everywhere."
10. The merism in Genesis 1:1 contains two elements, "heaven and earth," indicating everything, the whole universe, while the three-part expression in Exodus 20:11 refers in particular to the Creation week. For the significance of the merism for the Creation account, see Richard Davidson, "The Biblical Account of Origins," *Journal of the*

Adventist Theological Society 14/1(2003), 19-22, 32-34, and in ch. 7 of this volume, "Understanding the 'When' of Creation in Genesis 1-2."

11. The reference to Exod 20:11 in Acts 4:24 is evident, the three-part phrase "heaven and earth and the sea, and all that is in them" being virtually identical. The only other OT text containing the exactly same wording is Psal 146:6, which most likely also quotes from the commandment. It is common also to refer to Isa 37:16, which, however, is a merism, not containing the third element, the sea. The wording in Acts 14:15 is likewise identical to Exod 20:11. Most commentators note the connection. I. Howard Marshall writes that Paul is "revealing to them the existence of the living God, the Creator of the Universe (cf. 4:24; 17:24, citing Exod 20:11) and urging them to turn from their futile idols to this God," *The Acts of the Apostles: An Introduction and Commentary*, Tyndale New Testament Commentary Series, (Leicester, UK: InterVarsity Press, 1980) 238.

12. The use of the Creation motif in both Paul's speech on the Areopagus (Acts 17:24-26) and in the epistle to the Romans (1:20-25) underscores that the references in Acts 4 and 14 are far from peripheral, but describe core elements of early Christian worship and preaching.

13. At times this position is challenged, as by Kaltner (48-49) in the context of both the Qur'an and the Bible. But this is a misunderstanding, and the logic behind the concept of creation out of nothing is clear and evident: if God created everything by his word, then one cannot argue that anything else existed before the world from which the world was formed. In that case God would not have created everything, which is the repeated claim of both the Qur'an and the Bible.

14. This contrast between the Judeo-Christian and the Greco-Roman concepts of God becomes even clearer when it is realized that 1 Cor 8:6 rephrases the so-called *shema* of Deut 6:4, critical to the Old Testament and Judaic understanding of God.

15. The reference to Jesus as the Son of Man at the right hand of God reflects Psal 110, which is used consistently throughout the New Testament, not least in the Epistle to the Hebrews, to highlight the role of Jesus as the kingly priest in the heavenly temple, cf. Heb 1:3; 5:6; 7:21; 8:1 *et al.*

16. The phrase coined by Abraham Joshua Heschel in his now classic *The Sabbath: Its Meaning for Modern Man* (New York: Farrar, Strauss and Giroux, 1951), 12.

17. The thought may be added that the notion of the Sabbath day as the seventh day, that is a specific day, not just any day in seven, assumes the veracity and inspiration of the Scripture as *revelation* from God.

18. See the detailed discussion by Joseph A. Fitzmyer, both in his monumental commentary on *Romans*, *The Anchor Bible* (New York: Doubleday, 1993), 411-417, and in his article "The Consecutive Meaning of *Eph Ho* in Romans 5:12," *New Testament Studies* 39 (1993), 321-339. In the article, written later than the commentary, Fitzmyer concludes that the meaning "because" has no grammatical foundation, and that the expression is to be understood as a result clause, "so that."

19. From the Pauline epistles I have chosen the use of the Creation account in Rom 5 rather than for instance 1 Tim 2:13-15, due in part to the fact that the translation and context of the latter text is both somewhat uncertain and controversial. We find a number of

other references of various weight in Paul to Gen 1-3, such as Rom 1; 1 Cor 6:16; 11:7-12; and 15:21-22, 45; see the discussion in Peter C. Bouteneff, *Beginnings: Ancient Christian Readings of the Biblical Creation Narratives* (Grand Rapids, MI: Baker Book House, 2008), 33-54.

20. Joseph Fitzmyer rightly notes that the "therefore" should "be understood as drawing a conclusion from vv. 1-11 as a whole," *Romans*, 411.

21. R. C. H. Lenski, *The Interpretation of St. Paul's Epistle to the Romans* (Minneapolis, MN: Augsburg Publishing House, 1961), 356-357.

22. The three basic sources for the doctrine of the Trinity in the early church were the biblical testimony, devotion to Jesus Christ and the drama of salvation, which is my focus here. For good introductory descriptions of the development of the doctrine, see Allan Coppedge, *The God Who Is Triune: Revisioning the Doctrine of God* (Downers Grove, IL: InterVarsity Press, 2007), especially 79-110, and Roger E. Olson and Christopher A. Hall, *The Trinity, Guides to Theology* (Grand Rapids, MI: Eerdmans, 2002).

23. It is significant for our trust in the unity of the Creation account in Gen 1 and 2 that Jesus not only explicitly quotes Gen 2:24 in Matt 19:5, but also that in his previous remark in v. 4 refers to the text in Gen 1:27 by saying that the Creator "from the beginning made them male and female"; cf. the comment by John Nolland that Matthew is "sensitive to the move from Gen 1:17 to 2:24," *The Gospel of Matthew*, *The New International Greek Testament Commentary*, NIGTC (Grand Rapids, MI: Eerdmans, 2005), 771.

24. This position is of course the one championed by the early church by the doctrine of the "resurrection of the flesh," in stark contrast to the prevailing view of the Greco-Roman culture. For this, see Claudia Setzer, *Resurrection of the Body in Early Judaism and Early Christianity: Doctrine, Community, and Self-Definition* (Boston and Leiden: 2004). My position, briefly stated above, is also informed by two recent significant works on human identity, Richard Lints, Michael S. Horton and Mark R. Talbot, eds., *Personal Identity in Theological Perspective* (Grand Rapids, MI: Eerdmans, 2006), and Joel B. Green, *Body, Soul, and Human Life: The Nature of Humanity in the Bible*, *Studies in Theological Interpretation* (Grand Rapids, MI: Paternoster Press/Baker Academics, 2008).

25. This conclusion is informed by the discussion by Robert Di Vito, who provides a good overview of the issues of human "individuality" and "personal autonomy" and identity in "Old Testament Anthropology and the Construction of Personal Identity," *Catholic Biblical Quarterly* 61 (1999), 217-238. Analyzing relevant Old Testament texts, Di Vito observes that human identity is never equal to one particular aspect or part of the human being.

26. The nature of the book of Daniel does not open itself to explicit references to the Creation account, but allusions abound, as in the bestiality and madness of Nebuchadnezzar and the images in chs. 2 and 3. Such allusions have been explored by Jacques Doukhan, "Allusions à la création dans le livre de Daniel", in *The Book of Daniel in Light of New Findings*, ed. A. S. Van de Woude (Leuven: Leuven University Press, 1993), 282-292, and more recently and with a more narrow focus by Andre Lacocque, "Allusions to Creation in Daniel 7", in *The Book of Daniel: Composition & Reception*, eds. John J. Collins and Peter W. Flindt (Leiden: E. J. Brill, 2011), vol. 1, 114-131.

27. It is in this sense that believers in the New Testament are called saints (Rom 1:7; 1 Cor 1:2 *et al.*). In the New Testament the object for the verb to sanctify (*hagiazō*), except for technical matters related to the temple, is first and foremost persons: the saints are holy because they are sanctified to God (1 Cor 1:2; *cf.* Acts 20:32; Heb 9:13).

28. S. B. Ferguson and D. F. Wright, eds., *New Dictionary of Theology* (Downers Grove, IL and Leicester, England: InterVarsity Press, 1988), 616.

29. "In the Psalter YHWH is the creator of heaven and earth. This claim is everywhere assumed in the Psalms," Walter Brueggemann, *Old Testament Theology: An Introduction*, Library of Biblical Theology (Nashville, TN: Abingdon Press, 2008), 187.

30. Jacques Doukhan, "The Genesis Creation Story" (PhD dissertation, Andrews University, 1978), 90-94.

31. For the understanding of the "great sin" in Psa 19:13 as a reference to the Fall, see for instance, D. J. A. Clines, "The Tree of Knowledge and the Law of Yahweh (Psalm XIX)," *Vetus Testamentum* 24 (1974), 13.

32. Jiri Moskala investigates the links between the dietary laws and the Creation accounts and the story of sin in Genesis 1-3 in "The Laws of Clean & Unclean Animals in Leviticus 11" (PhD dissertation, Andrews University, 1998); see especially ch. 3, 160-

280 and the conclusion on pages 353-363.

33. *Cf.* Andrew Reid, *Salvation Begins*, xii.

34. Others include the Wedding Feast, the Feast of Tabernacles (Sukkoth), and the community of the grand city (Jerusalem).

35. The term *tohu*, wasteland or nothingness, in Isa 45:18-19 refers the reader back to the *tohu wabohu* of the Creation account, where the earth was exactly that, "formless and void" (Gen 1:2).

36. The theme of promise and fulfillment is pursued, among others, by Walter C. Kaiser Jr.; see *Toward an Old Testament Theology* (Grand Rapids, MI: Academic Books, Zondervan, 1978).

37. Derek Kidner, *Genesis* (Nottingham, UK and Downers Grove, IL: InterVarsity Press, 1967), 17.

38. The distinction at times made between what is called cosmogony and cosmology is a slightly different issue, but the distinction is hardly defensible from within the biblical texts themselves, see the discussion by Davidson (*JATS*, 14, 7-12).

39. Davidson (14-15) provides references to critical scholars who themselves do not believe in the veracity of the Genesis account, but who are convinced that both author and original audience would have believed it, such as Plantinga, Julius Wellhausen, James Barr and Gerhard von Rad.

Chapter 9

THE NEW TESTAMENT USE OF THE GENESIS TEXT

Steven Thompson

The New Testament cites or alludes to the Old Testament about four thousand times, or on average six times per page of the standard published Greek text.¹ This permeation of the New Testament by the Old often escapes the notice even of its informed readers but has attracted scholarly attention throughout Christian history, and currently is pursued with the aid of refined methods and tools known as “intertextuality.”² Approximately 330 of these citations and allusions are to the book of Genesis. They are distributed widely through the Gospels, Acts, Epistles and Revelation.³ The authors of the New Testament documents assumed that Genesis was a reliable source of information about origins, the Flood and the Hebrew patriarchs. Matthew and Luke for example relied on Genesis for their genealogies of Jesus, and they cited Jesus’ reference to Noah and the Flood in a manner that assumed its historicity (Matt 24:37-39; Luke 17:26-30). Jesus, according to John 8:39-59, engaged in a discussion of his nature and mission that similarly assumed the historicity of Genesis.

When Paul declared that “death ruled from Adam to Moses” in Romans 5:14 he assumed his readers shared his view of the historicity of Genesis. In Romans 4:9-12 he rested a supporting pillar of righteousness by faith on a historical detail in the narrative of Abraham’s life, noting that faith was reckoned to Abraham as righteousness in Genesis 15 before Abraham received circumcision in chapter 17.⁴ An assumption of historical reliability lies behind the account of the ancients who persevered in faith in Hebrews 11. In Revelation 7 John described part of the content of his visions drawing on the twelve tribes descended from the sons of Jacob named in Genesis, and his reference in chapter 5, verse 5 to the lion of the tribe of Judah echoes Genesis 49:9-10. In these and many additional passages the New Testament authors consistently assumed the Genesis narratives were historical.

But how did the New Testament authors use Genesis? What theological impact did it make? Was it applied to resolve congregational issues and debates? What practical lessons did the earliest Christians extract from Genesis? How did it equip them for life and witness in the complex religious and social environments of the cities where they lived? This chapter seeks answers to these questions.

The importance of Genesis for believers in New Testament times can be illustrated in the limited scope of this chapter by outlining how a single part of Genesis, the Creation and Fall account of chapters 1-3, was used by the New Testament writers. Genesis 1-3 is echoed repeatedly in the New Testament, both in direct quotations and in allusions.⁵ Each Gospel, the Acts, the apostle Paul’s major letters, several of the general Epistles and Revelation, frequently echo its words and themes. There is no doubt that the message of Genesis, including its account of beginnings, was understood

literally by the majority of its ancient Jewish and Christian readers. But what were the practical benefits of this belief? Part of the preparation for answering this question will be to survey the function and role of accounts of origins across the ancient world and their reception in order to provide context for the New Testament use of Genesis.

The authors and first readers of the New Testament did not write and read in a cultural vacuum, but were immersed in cultures whose roots stretched back into antiquity. Societies in the New Testament world preserved one or more accounts of origins.⁶ Recent research demonstrates that ancient people looked to their creation accounts for answers to questions of identity, purpose and guidance for how to live in community. In the words of Kevin Mellish, there was a “relationship between the creation accounts themselves and . . . cultural settings.”⁷ The following exploration of features of selected nonbiblical origins accounts will prepare readers to understand the main purpose of this chapter, which is how the New Testament writers used Genesis. The essay will conclude by suggesting how contemporary Christians can apply the insights gained on this journey.

Creation as a Fundamental New Testament Belief

Although the New Testament contains no creedal statement such as “I believe in God, Creator of heaven and earth,” belief in God as Creator is everywhere assumed by its authors.⁸ They wove it into the fabric of the transmission of the gospel. The early Christian belief in God as Creator emerged from that of mainstream Judaism. Jews and apostolic Christians shared a common doctrinal ground provided by the Old Testament picture of the one Creator God.⁹

Christians even shared with at least some Jews the belief that God did not create alone, but had an assistant. While the Old Testament clearly stated that the one God created by himself, yet in the heart of the Genesis Creation account, God “spoke” using the plural “let us make” (Gen 1:26).¹⁰ Several ancient explanations were put forward, including one by Philo (died c. AD 55), a Greek-educated Jew contemporary with Jesus. He wrote that God in creating had “fellow workers and obedient subordinates.”¹¹ The inferior contributions of these “fellow workers and obedient subordinates” accounted for the inferior conduct that resulted from the Fall. Another, more scriptural companion for God in creation was divine wisdom. This was based on Proverbs 3:19: “Yahweh by wisdom founded the earth; by understanding he established the heavens.” This passage, along with Proverbs 8:22-31, provided Old Testament justification for the Jewish understanding that wisdom was Yahweh’s companion in the work of creation. Early Christians adopted this Jewish belief but understood these passages to refer to the preexistent Christ. This is clearly the case for John 1:1-3 and Colossians 1:16.

This, however, was just one of many functions of the Genesis Creation account in the New Testament. Others will be sketched in the following sections of this essay. New Testament authors left little evidence that they were occupied with arcane or highly specialized aspects of the mechanism of creation, such as whether the Creator used preexisting matter.¹² The issues facing New Testament congregations were more immediately connected to their survival in a harsh and sometimes brutal society. The cultural conditions they lived under influenced their reading and application of Genesis, as illustrated by what follows.

Ancient Bans on Publicly Debating Origins

Not everyone in the ancient world was free to openly explore and debate origins. Among Greek thinkers Socrates (469-399 BC) argued against publicly teaching or debating the origin and nature of the cosmos, even though he was aware of the rich heritage of Greek rational thought of several of his predecessors. He stated near the end of his life that he had no interest in discussing the origin and nature of the cosmos.¹³ According to Plato specialist Harold Tarrant, “such theories had never been discussed publicly, as this was too dangerous.”¹⁴ One of the indictments against Socrates, which contributed to his execution, was that “he inquires into things below the earth, and in the sky.”¹⁵

Plato (427-347 BC) acknowledged the risks accompanying public speculation on origins. He personally faced them when he wrote his own creation account, completed as he neared his eightieth year. He intended it for a restricted readership: “The maker and father of this universe it is a hard task to find, and having found him it would be impossible to declare him to all mankind!”¹⁶

Roman reluctance to openly discuss origins was expressed by Pliny the Elder (AD 23-79). He declared in his multivolume natural history encyclopedia that “What lies outside [the world] does not concern men to explore and is beyond the capability of the human mind to guess.”¹⁷ Greeks and Romans sensed the risk involved when origins accounts, which helped provide people groups with their collective identity, sense of purpose, guidelines for conduct and sometimes hope for the future, were publicly subjected to skeptical analysis. Those who wanted to pursue their speculative inquiries into origins without facing possible punitive consequences needed to exercise caution and go about their work quietly.

Jewish communities also lived under a ban on public teaching and debating of the Genesis Creation account. This was probably rooted in Job 38, where Yahweh challenged Job and his comforters to acknowledge their ignorance of the nature of creation, and to stop “darkening counsel by words without knowledge” (Job 38:2). Further Old Testament support for a ban was possibly provided by Isaiah 43, a chapter sprinkled with technical Creation terms from Genesis, such as “to create” (*bara'*, vv. 1, 15) and “to form” (*yatsar*, v. 1). In verse 27 the sin of the “first father” probably refers to Adam’s sin in the Garden. In the midst of this chapter’s echoes of the Creation account there is, in verse 18, a directive to “to stop dwelling on (or remembering) beginnings” (*rishownith*, a Hebrew term similar to the first Hebrew word of Genesis 1:1, *reshiyith*). While the ostensible theme of Isaiah 43 is the beginning of the Hebrew nation, the ancient Israelite reader would have noticed Isaiah’s deliberate verbal allusions to the Genesis Creation account. The rabbis of the New Testament era expressed the ban in the following words:

Not to be expounded are . . . the event of creation in the presence of two persons, or the chariot in the presence of one person, unless he is a scholar who is already educated. Whoever contemplates four things, it were better for him if he had not come into the world: what is above, what is below, what is before and what is after.¹⁸

The authorities did not explain the reason for their ban, leaving modern interpreters to speculate. Was it to avoid offending God by prying into the secrets of Creation? Was it to avoid the threat of the Jewish community’s identity and mode of life, which was squarely grounded on the Genesis Creation account?

Getting Around the Bans

These bans by both Greek philosophers and Jewish rabbis were not uniformly enforceable. In the Greek world public exposition of origins was promulgated from the time of Socrates onwards by the so-called Sophists, higher education “professors” who moved from place to place, offering short-term courses that typically included models and theories of origins. Their mobility gave them more intellectual freedom than typically allowed to residents of the Greek cities. This raised suspicions about their ethical accountability and trustworthiness, and provided the negative connotation still carried by the word “sophistry.” This early emergence among the Sophists of what might be understood as intellectual freedom provided them an independent voice, freed somewhat from the traditional, conservative Greek reluctance to speculate about the origins and nature of the cosmos.¹⁹

From about 200 BC these Greek Sophist “professors” entered the Roman world, prompting fears that their doctrine of relativism, their mode of unrestricted skeptical questioning and their tendency to argue with equal conviction both sides of an issue, would corrupt Roman students. The resulting tension led to several expulsions of philosophers, including Sophists, from Rome between 173 BC and AD 90. But the rational open-mindedness and intellectual freedom they helped to introduce was not so easily expelled, and by the time of the New Testament many Romans as well as Greeks, partly due to Sophist influence, openly and vigorously debated the origin and nature of the cosmos.

The Jewish ban did not cover the entire Genesis Creation account. In the words of the earliest rabbinic commentary on Genesis, “The Torah knows what was before the creation of the world, but you have no business to enquire about aught save ‘Since man was placed upon earth.’”²⁰ In other words, Jews were allowed to publicly debate the Creation account from Genesis 1:27 onwards. These rabbinical exegetical speculations were collected into what became known as *Genesis Rabbah*, Hebrew for “Great [Exposition] of Beginnings.” Jews receptive to Greek culture and education could also access extensive comments on Genesis by Philo of Alexandria, whose work reveals the sorts of questions generated by the growing interaction between Jewish and Greek communities in the New Testament era. Both Jewish and Greek creation accounts thus contribute to the context for New Testament references to the Genesis Creation account.

Ancient “Scientific” Accounts of Origins

New Testament writers did not attempt a “Christian” scientific account of Creation, but they were aware of the need to prepare Christian believers for encounters with educated people, as well as to assist them to answer their own questions. Six centuries prior to the New Testament era, Greek speculative thought began to be applied to answer questions about the origin and nature of the cosmos. This was a precursor to today’s scientific method, and it differed markedly from the widespread myths of origins in circulation from an earlier era. The work of Greek naturalists, or *physikoi* as Aristotle (384-322 BC) called them,²¹ introduced new categories of thought and new methods into the quest for knowledge. Observation and rational explanation now competed with divine revelation. These Greek thinkers came to be known collectively as the pre-Socratics, because the earliest of them lived and worked during the decades before the birth of Socrates.²²

The yawning conceptual gap separating the views of the pre-Socratics from those embedded in the mythical creation accounts can be illustrated by the four key Greek nouns expressing four key conceptual methods that the pre-Socratics employed in discussing origins:

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1. *Kosmos* referred to the totality of things; the universe; that which is ordered, inhabited and predictable, as opposed to what is chaotic, uninhabited and unpredictable. *Kosmos* designated both the source of order and its product, the cosmos, or world of order.
2. *Physis* designated “nature” related to the Greek verb “to grow.” Nature was the realm of all things subject to change due to growth and decay. *Physis* also could refer to the principle behind changing things.
3. *Arche* meant “beginning” or “origin”; also “first principle.” Thus *arche* expressed the beginning of something in time, but could also refer to the first principle, or ruler, presiding over the *kosmos*.
4. *Logos* designated the process of reasoning, and its expression through rational dialogue or explanation.²³

These four nouns and their accompanying concepts became integrated into Greek rational cosmological discussions. All four also appear in the New Testament, sometimes in the passages that assume awareness of the realm of Greek rational thought to describe the cosmos.

The pre-Socratics did not stand out as atheists in their own generations or in the following ones.²⁴ Nor did they as a group set themselves in opposition to the prevailing pre-Christian theologies in their day. The wedge that has been driven between contemporary science and religion was not initiated by the pre-Socratics. While their outlook was “scientific” it was not exclusively materialist, and it did prevent several of them from accepting the reality of spirit as well as of matter. In some of their surviving statements spiritual beings, including gods, could and did involve themselves with matter, even to the extent of creating it.

But that casual mingling of spirit with matter changed in the next phase of Greek philosophy, led by Plato. For him, the unchangeable spiritual nature of the gods separated them from any direct involvement with the realm of changing material nature (*physis*).²⁵ This barrier between spirit and nature had become absorbed into popular versions of Platonic thought by the New Testament era. Its main practical impact was to counter the belief that the gods involved themselves in the day-to-day functioning of the cosmos.²⁶ By contrast, the New Testament testified to God’s constant and personal involvement, culminating in the incarnation of his Son. This is the theme of John 1:14; 3:16-17; Galatians 4:4; Hebrews 2:9-10; 1 Peter 1:18-20.

Criticism of Ancient “Scientific” Accounts of Origins

The pre-Socratics use of observation and reason to deconstruct mythic origins accounts was met with suspicions and resistance by Socrates. According to his student Xenophon, he “did not even discuss the topic favoured by other talkers, ‘the nature of the universe’: and avoided speculation on the so-called ‘cosmos’ of the Professors, how it works, and the laws that govern the phenomena of the heavens: indeed, he would argue that to trouble one’s mind with such problems is sheer folly.”²⁷ Plato, like Socrates, doubted the ability of observation and reason to account adequately for origins. He stated his disbelief in the *Timaeus*, pointing out shortcomings in rational accounts of origins: “in many respects concerning many things – the gods and the generation of the universe – we prove unable to render an account at all points entirely consistent with itself and exact.” This is followed by his famous description of any rational account of the creation and nature of the cosmos as a “likely story” (Greek *eikos mythos*).²⁸ For Plato, rational accounts of creation were never more

than likely or plausible, because they built on the study of nature, *physis*, which the pre-Socratics defined as changing or, using Plato's labels, "becoming and passing away." Human inability to penetrate behind changing nature to the inner "being" of the universe limited all rational or scientific explanations of origins to approximations – "likely stories."

Plato's devastating critique of rational Greek accounts of origins by the pre-Socratics and their successors was echoed by the leading Greek-speaking Jewish thinker of his age, Philo. Among his extensive comments on Genesis was his declaration that God foresaw the rise of the speculative, scientific approach to knowledge, a time when people "would be intent on what looked probable and plausible, with much in it that could be supported by argument, but would not aim at sheer truth; and how they would trust phenomena rather than God, admiring sophistry more than wisdom."²⁹

New Testament Answers to "Scientific" Accounts of Origins

The clearest New Testament case against a rational account of origins, with its risk of destroying the believer's confidence in belief of the divine origin of the cosmos, is in the epistle to the Hebrews, which addressed Greek-educated Jewish converts to Christianity: "By faith we understand that the universe was ordered by the word of God, so that what is seen was not brought into being from anything observable" (11:3).³⁰ This philosophically informed defense of Creation asserts the following core biblical beliefs:

1. God's Word is the creative agent that ordered creation.
2. Humans can learn the identity of the true source and agent of creation.
3. A believer's understanding of creation is grounded on faith, not observation.
4. Realities undetected by human sense existed prior to visible things.
5. The unseen realities provided the basis for visible created things (also stated in verse 1).

Hebrews 11:1-3 provides a brief, elegant and informed Christian response to six centuries of Greek speculation on the origin and nature of the cosmos. It affirms that understanding of origins cannot be derived from even the most detailed observation of phenomena, because Creation was not a phenomenon, therefore it was not accessible to a human observer. Creation was pre-phenomenal, or superphenomenal, and for that reason beyond human observation. The resulting created realm, which humans clearly perceive, arose from invisible divine creative action, but of itself does not provide a point of view from which humans can observe the spiritual reality behind it. The believer's response should be to honor the Creator, not to assume possession of the ability to analyze the Creator's actions.

Some early Christians were tempted to employ speculative theories of origins in their efforts to discern the world's future. This is a theme of 2 Peter 3:3-7, which addressed the doctrine of the *parousia* of Christ. The scoffers referred to there, who disbelieved that the *parousia* would happen, probably based their disbelief on two related Greek cosmological theories in wide circulation at the time. The first was the theory of the indestructibility of the cosmos.³¹ The second was the theory of uniformity – belief that the earth during its existence had not been subject to catastrophic change.³² Belief in the earth's indestructibility had been forcefully argued by Aristotle, and continued to be popular in the New Testament era.³³ Its most important corollary was that it undermined Christian belief in the final judgment and cleansing of the earth by God. Second Peter 2:3-10 countered by arguing that the biblical Flood was a worldwide catastrophe occasioned by God's intervention. Just

as God had created the world and had brought worldwide destruction in the past, so he will cleanse the world by fire in the future (2 Pet 3:5-7). The main concern behind this section of the epistle is judgment, but it refers in passing to God's creative activity to counter the skeptics' rejection of the message of coming divine judgment.³⁴

Intelligent Design Versus Chance: The Argument in Antiquity

The Old Testament assumes the existence of an intelligent Designer of the world,³⁵ not only in the Genesis Creation account, but also in Job 38-41; Psalms 8; 19 and Proverbs 30:19. Ancient Jewish belief in intelligent design built on these Old Testament passages. Intelligent design was not argued but simply declared by Philo, when he wrote that God is humanity's maker and father, who in his creative activity put in place facilities to preserve his creatures from harm and to provide for their needs.³⁶

Intelligent design also had Greek advocates, including Socrates. In a dialogue with Aristodemus, who assumed that life-forms came into existence due to "fate" (Greek *tyche*), Socrates built a case for the view that "things came into being by design" and that "they are the handiwork of a wise and life-friendly divine creator."³⁷ Socrates then argued that the crowning product of creation was human beings, with the rest of creation available to meet human needs. This became the dominant intellectual position across the Greek world of the New Testament era.³⁸

Early opponents of intelligent design included the pre-Socratic Anaximander (died c. 545 BC), who speculated that humans developed from fishlike animals that were eventually set on land, where they continued to develop.³⁹ Empedocles (c. 495-435 BC) extended this early view of random natural selection, speculating that there was a time when disconnected body parts were formed by chance: "Naked arms strayed about, devoid of shoulders, and eyes wandered alone, begging for foreheads."⁴⁰ His logical starting point uncannily resembles that of contemporary evolutionists when they appeal to random chance in the development of life-forms. Another pre-Socratic, Democritus (born c. 460 BC), best known as the father of atomic theory, provided inspiration for Epicurus (341-270 BC), the ancient Greek champion of natural selection by random chance. For him, there had never been a creator at work with a plan or goal. The cosmos came about as the result of random combinations of countless numbers of atoms. Existence therefore had no meaning, and it would someday dissolve into the infinite sea of swirling atoms, perhaps to form another equally pointless world in the future.⁴¹

The mantle of Epicurus fell eventually onto the shoulders of the Roman poet-philosopher Lucretius (c. 94-50 BC). His extended poem *On the Nature of Things* probably expressed the view typical of New Testament era intellectuals, who were committed to practical atheism. Lucretius maintained that the gods, even if they existed, were in no way involved with either the creation or the future of this world. According to him, the cosmos reached its present state by bringing forth a pointless, random stream of life-forms. The defective ones, unable to feed or reproduce, dissolved back into the infinite swirl of atoms.⁴²

Intelligent Design in the New Testament

When Jesus stated that "the Sabbath was made for man, and not man for the Sabbath" (Mark 2:27) his hearers would have been immediately aware not only that he accepted the Genesis account of Creation and the validity of the biblical Sabbath, but also that he believed in an intelligent Designer who designed humans and assigned them a particular place in a thoroughly designed creation.

Hebrews 6:7-8 echoed the Genesis account of Creation and the Fall, and mentioned in passing that crops growing on cultivated land benefit from rainfall and are useful to those who cultivate them. This echoes the Creator's directive to till the soil (Gen 2:15), and assumes intelligent design. Paul took a clear stand for intelligent design when he wrote that God arranged the parts of the body (1 Cor 12:18, 24). The goal of the Creator's "intelligent" arrangement of body parts was an organized, united, functioning human entity, free of discord; each part designed to function cooperatively, so that the person became greater than the sum of his body parts (v. 25). Paul appears to directly challenge the Epicurean evolutionary theory of random, disconnected body parts.

Paul discerned a final layer of purpose in the Creator's design – he planned to fit individual humans into the collective body of believers. Together they, rather than the individual believer, thus constituted the goal of the Creator. This idea is expressed in 1 Corinthians 8:6, which states that believers, like the rest of created things, exist for God the Father. It was expanded in 1 Corinthians 12:27, "You [plural, not singular] are the body of Christ, that is, parts of the whole." This idea recurred in Ephesians 2:10: "We are the result of his creative action, created in Christ Jesus for the purpose of good deeds of service, which God prepared in advance that we should so conform our lives." New Testament testimony to intelligent design goes beyond declaring even the collective "body" of believers to be the crown of creation. Rather, it testifies that Christ's body of believers was planned, ultimately, for service to the Creator.

Creation as Ground for Social Order

Ancient societies looked to accounts of origins to provide templates for structuring society, and guiding principles for day-to-day social ordering. This has recently been demonstrated for several ancient Near Eastern societies.⁴³ In the Old Testament the most obvious appeal to Creation as grounds for social order is the fourth commandment in Exodus 20:8-11. It grounded the dual commands to work six days and rest on the seventh in the Creation account. Additional Old Testament passages such as Psalm 104 also contributed general guidelines for Israel's relationship to the earth, plants, animals and people.⁴⁴

Plato prefaced his *Timaeus* with a reminder that his earlier work, the *Republic*, had as a major theme how people should live. He wished to demonstrate that constructive human conduct in society was possible because the world was created with an inbuilt order and harmony that extended to the lives of individuals in a community. A creation account was important for Plato because it provided the template for how people should function in a community.⁴⁵ In the words of one source, "Plato intends to base his conception of human life, both for the individual and for society, on the inextinguishable foundation of the order of the universe."⁴⁶

Closer to New Testament times Philo wrote of Genesis: "It consists of an account of the creation of the world, implying that . . . the man who observes the law is constituted thereby a loyal citizen of the world, regulating his doings by the purpose and will of Nature, in accordance with which the entire world itself also is administered."⁴⁷

Creation as Ground for Social Order in the New Testament

In light of this expectation that Creation accounts provided social guidelines, it is not surprising to see New Testament authors drawing from the Genesis Creation account a template for structuring

Christian communities. When Paul wrote “let things be done correctly and according to proper procedure” (1 Cor 14:40), his first readers were already aware, from his earlier references to the Creation account in 1 Corinthians 7:2 and 11:8-9, that he considered it an authoritative template for the order he expected should replace, for example, the boisterous and disorderly Christian worship services in Corinth.

In grounding exemplary conduct during worship in the Genesis Creation account, Paul followed established Hebrew and Greek practice. When he called for appropriate head covering during those parts of worship given to prayer and prophesying, he again grounded his appeal in the Creation account: “for male is not from female, but female from male” (1 Cor 11:8). He acknowledged in 11:12 that the creation priority of male over female had become reversed, or at least counterbalanced, once human reproduction started, and males came from females. Here he echoed Genesis 2:23 and 4:1, two Genesis passages that also provided grounds for 1 Timothy 2:13-14, which also addressed male and female roles in Christian gatherings. The silence of women, and their submission to men in worship settings, is called for because “Adam first was formed, then Eve, and Adam was not deceived; rather, the woman, having been deceived, became a transgressor” (citing Gen 2:23; 3:13). This passage, like 1 Corinthians 11, concluded by referring to Genesis 4:1, acknowledging the role assigned the female in reproduction and its counterbalancing impact on the Creation account’s male priority.

These New Testament passages drew on the Creation account to lay ground rules for the newly formed Christian communities that collectively constituted the body of Christ, the second Adam. Apostolic church leaders drew from the Genesis Creation account templates for ordering community life. But Paul also made his churches aware that, for those called to live as the “new creation in Christ,” over which the old order has lost its hold (2 Cor 5:17), a new order of creation was emerging that would in some ways transcend the original.

Creation as Ground for a New Testament Ethic of Marriage, Sex and Speech

The Genesis Creation account supported the call for ethical living among early Christians in the areas of marriage, sexual relations and responsible speech. The authority of Genesis 1:27 and 2:24 for establishing the exclusivity and permanence of marriage was brought forcibly to the attention of the early church by both Jesus (Mark 10:6-8; Matt 19:4-6) and Paul (1 Cor 7:27; Eph 5:30-33). Both grounded major pronouncements about the nature of Christian marriage on these two Genesis verses.⁴⁸

A general Christian sexual ethic was also grounded in the Genesis Creation account by Paul when he wrote to the Corinthians “the one who joins with a prostitute [becomes] a single body” (1 Cor 6:16). He not only extracted this striking image from Genesis 2:24, but also based his admonition to avoid prostitution on its creative “one flesh” theology.⁴⁹ For Paul, both the theology and ethics of marriage and general sexual behavior were established by the Creator and expressed in these two brief Genesis verses.

Jesus issued calls for responsible speech among his followers (see Matt 5:21-22, 33-37; 7:1; Luke 6:37-38).⁵⁰ Although the Gospels do not link them to the Genesis Creation account, that link is present in another New Testament treatment of Christian speech. James 3 describes the untameable tongue, which is able to both bless the Father and curse humans “who are made according to the likeness of God” (v. 9). This echo of Genesis 1:27 reminded James’s readers that God pronounced

blessings upon the newly created animals, humans and Sabbath in Genesis 1. The first curse, which came in consequence of the fall of Eve and Adam, occurs in Genesis 3. The pre-Fall state of blessing was sadly diluted by the Creator's introduction of the curse into creation – upon the serpent in 3:14 and upon the ground in 3:17. The opposing elements of blessing and curse would henceforth be mingled in the experience of God's covenant people (see especially Lev 26 and Deut 28).

This set a pattern that would prevail until the dawning of the kingdom of God during the ministry of Jesus. But that pattern, with its mingling of blessing with curse proceeding “from the same mouth” (James 3:10) was ending for followers of Jesus. When James wrote, “It is not necessary, my brothers, these things [mixture of blessing and cursing] to happen this way!” he implied the end of the era of the indiscriminate flow of blessing and curse from the same tongue. He supported it by drawing on two additional features of the Creation account. First, he reminded readers of the boundary separating fresh water from salt water established by the Creator when he brought order out of chaos (v. 11).⁵¹ Then, echoing the divine instruction to living things to reproduce “after their kind” (Gen 1:11, 21), James implied that just as fig trees will not produce olives, so believers' tongues will cease from producing curses.

While the removal of the curse was already taking place in the lives of early Christian believers, the final, complete removal of the curse from the renewed creation awaited the future completion of the new creation of the cosmos by the Creator. It was glimpsed by John in the book of Revelation, where he declared one of the goals of the Creator: “the curse shall be no more” (Rev 22:3).

New Creation/Re-creation in the New Testament

While James provided a glimpse of the practical side of the new creation emerging within the early Christian community, Paul developed the concept into a significant Christian doctrine.⁵² He drew on Old Testament prophetic utterances foretelling a new creation such as Isaiah 65:17: “I am creating a new heaven and a new earth.” Paul's doctrine of the new creation had a threefold foundation:

1. Isaiah 65 and similar Old Testament prophetic declarations.
2. The resurrection of Christ as the new Adam (see 1 Cor 15:21-22).
3. The power of God that Paul experienced following his conversion and apostolic calling.

On the strength of these three supports, Paul declared, “If anyone is in Christ, that person is a new creation. The old has come to an end. Look! The new has come into being” (2 Cor 5:17). Nothing less than a new creation could account for what Isaiah foresaw, and what Paul himself experienced following his conversion.

The existing cosmos has been crippled by a crucial defect according to Paul. It was in servitude to “decay” (Greek *phthora*, employed widely by Greek philosophers to express “passing out of existence”). Only the coming divine intervention could liberate it from its collision course with destruction (Rom 8:21). Christian believers caught up in the cosmic decay eagerly awaited the promised liberation. Paul encouraged their faith by, first, drawing on the Roman custom of adoption of adults (v. 23) to help them visualize their newly acquired change of status.⁵³ Second, he reminded

readers of the already-evident work of the Holy Spirit in their lives (vv. 26-27), which he explained by echoing the Genesis account of the creation of the first humans in the “image [*eikon*, the term used in the Greek translation of Genesis 1:26] of [God’s] Son” (v. 29). Romans 8:28 takes on significant additional meaning when read in the context of the new creation in which Paul placed it. While he would not have excluded the application to the individual, his intention here was to express the cosmic makeover to be experienced by believers as part of the new creation.

The practical result of the new creation is the theme of two other Pauline passages. Ephesians 4:17-32 starkly contrasts the re-created life with the unrenewed life “among the nations.” The echo of the Creation account in 4:24 is clear: “Put on the new *anthropos* [best translated “human” or even “Adam”] created according to [the likeness of] God” (again echoing Genesis 1:26). The apostle’s final reference to the new creation, Colossians 3:5-11, addressed the practical dimension of the new life. An extensive list of “earthly characteristics of the old *anthropos*,” which believers should put to death, is contrasted with the “new *anthropos*,” which they had put on. The primary quality of the new *anthropos* is expressed in the language of re-creation: “renewed . . . according to the image of the Creator” (vv. 5, 8-10).

According to Paul, the coming new *anthropos* will surpass the original *anthropos* of the Genesis creation, just as the new Adam surpassed the original Adam: “The first Adam became a living person; the last Adam a life-restoring Spirit. . . . The first man, from the earth, was earthy; the second man [is] from heaven. . . . Just as we carried the image of the earthly, so will we carry the image of the heavenly” (1 Cor 15:45-49). Paul’s new creation belief receives its clearest expression in his declaration that, for those baptized into Christ, who have put on Christ, “there exists neither Jew nor Greek, there exists neither slave nor free, there exists neither male nor female; for you are all one in Christ Jesus” (Gal 3:27-28). To be “in Christ” for Paul initiated a process that would culminate in the goal of the new creation – the elimination of all human divisions, and a unity that transcends ethnic, social and gender distinctions. He summarizes at the close of the epistle: “Neither circumcision nor uncircumcision is anything; rather, new creation” (Gal 6:15).

The final New Testament expression of this new creation is in the revelation to John. After an extended series of images depicting the emerging chaos resulting from the breakdown of the order originally built into the creation, John declared, “I saw a new heaven and new earth, because the first heaven and the first earth had departed” (Rev 21:1). The re-created world, in John’s view, centers around a city, the New Jerusalem rather than a garden. God, who only came to visit the Garden in the cool of the day, will be perpetually present in the city. And the city will house not just the original man and woman, but the redeemed human family from every nation, language group, ethnic group and people group.

Creation as Proclamation – Public Witnessing to Creation Accounts

Widespread interest in origins and cosmology in the New Testament world enabled the apostles to incorporate the biblical doctrine of Creation into evangelism. The New Testament preserves echoes of several public proclamations of Creation. A saying of the risen Christ incorporated a cue to his disciples of creation’s role in evangelism when commissioning them to proclaim the gospel: “Go to all the world and announce the gospel to every created being” (Mark 16:15).

During time spent in Lystra Paul delivered the New Testament’s briefest recorded evangelistic

address, which included the words “We share your humanity, bringing you good news. You are to turn from these empty things to the living God who made the heaven and the earth and the sea and everything in them” (Acts 14:15). Paul here cited the Sabbath commandment to highlight the Creation motif. He also referred to intelligent design, naming the orderly functioning of the Creation in providing for human needs: “Doing good he sent heaven’s rain and harvest seasons, in heart-warming and stomach-filling abundance” (v. 17). Later, in his evangelistic proclamation in Athens, Paul declared, “I proclaim to you the god who made the world and all it contains. Since he is Lord of heaven and earth . . . he gives to all men life and breath and all things” (Acts 17:24-25).

Proclaiming the God of Creation assumes a wider role near the close of the Christian age, according to Revelation 14. An angel messenger flying at the zenith of heaven proclaims eternal good news to earth’s inhabitants: “Fear God and give glory to him, because the time of his judgment has come; and worship the Maker of heaven and earth and sea and water fountains” (Rev 14:7). The Genesis Creation account provides the theological grounds for this three-pronged message to all earth’s inhabitants, expressed by three imperatives that call for a decided response to God: “Fear! Give glory! Worship!” The reason for this urgency is disclosed: “the time of his judgment has come.”

In summary, the New Testament calls for, and models, a crucial role for the message of Creation in the spread of the gospel. The risen Christ directed his disciples to do it, the apostle Paul modeled it for his culture and time, and John foresaw an end time renewed role for the doctrine of Creation in the spread of the gospel. Today’s world is on high alert about environmental degradation and the specter of dwindling resources. The cosmic decay and coming dissolution disclosed by divine revelation to Paul and John now starkly confront observers. The time has come for Christians to return to this New Testament use of the Creation account. A core Seventh-day Adventist belief is that “the message of creation is part of God’s last message to this world.”⁵⁴ Other Christian voices also call for use of the doctrine of Creation in evangelism. According to scientist and pastor Graham O’Brien, the time has come to advance beyond the skirmishes between “Evolutionism and Creationism” and move instead to employ the doctrine of Creation, as did Paul, in evangelism and Christian mission.⁵⁵

Conclusion

The New Testament makes clear that Jesus and the apostles accepted the historicity and reliability of the book of Genesis. It also makes clear that they went well beyond simple confirmation of its historicity. Abundant evidence from the New Testament indicates they actively and imaginatively applied facets of Genesis, including its Creation account, to provide doctrinal, ethical and social guidelines to help early Christians face challenges from their environment. Genesis in general, and its Creation account in particular, was more than an authoritative narrative of past events. It provided insights that could be applied to confirm identity, discern purpose and mission, resolve issues and generate hope that in the midst of strife and chaos the God of Genesis was already at work in their communities, through his Son and his Spirit, bringing about the promised renewal of creation.

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Chapter 10

CHRIST AND CREATION: IMPLICATIONS OF A CHRISTOCENTRIC UNDERSTANDING

William G. Johnsson

The current controversy over creation and evolution that is roiling many Bible-believing churches cuts with particular sharpness among Seventh-day Adventists. Our most distinctive practice, embodied in our name – the observance of the seventh day of the week as the Sabbath – is at stake in the debate. But even more is on the line: not just the Sabbath but the Lord of the Sabbath, Jesus Christ.

Our longstanding approach to the natural world forbids us from retreating into an obscurantist stance that refuses to face squarely the challenges posed by scientific evidence. We hold that the Scriptures are God's revelation to humanity, inspired by the Holy Spirit, but we also believe that nature is God's second book, not as perfect as the Bible, but none the less important to teach us about God and his character.

Throughout our history Adventists have encouraged study of the natural world and have held in respect those who give their lives to that investigation. Our educational institutions include the study of science in the curricula at all levels, and some Adventists have become leading researchers in a variety of fields. In particular, we have fostered research in areas related to health, so that Loma Linda University and Medical Center has become internationally recognized for cutting-edge research.

For Adventists, therefore, the controversy between creation and evolutionary theory can never be reduced to an either-or acceptance or rejection of either the biblical data or the scientific. We believe that both have one Author. We are compelled to wrestle with the tensions that arise from both areas.

Thus, one finds in our church an organization unique in the Christian world – the Geoscience Research Institute. This body, set up and funded from the highest levels of the world church, has as its mission the very wrestling described above. Its staff are all dedicated Adventists and are all scientists with earned doctoral degrees from reputable universities. They endeavor to accomplish what a host of other scientists and a host of Christian believers have deemed impossible – the harmonization of the data from Scripture with the evidence from the natural world.

I am not a scientist. Although my early university studies focused on chemistry, I do not have the academic preparation or experience to engage scientists in serious discussion. However, my early exposure to science imparted an understanding of the scientific method, with its amazing achievements and also its limitations. My contribution will be in the area of theology and philosophy, where I have advanced academic preparation and a lifetime of teaching and reflection. This chapter is rooted in biblical theology, and especially in the theology of the New Testament, the field of my

expertise. The study proceeds in four stages: (1) the question of where to begin the debate between creation and evolution; (2) the data from the life and teachings of Jesus Christ; (3) relevant data from the rest of the New Testament; and (4) the implications of that data for theories of origins. The chapter concludes with some brief reflections that arise from the study.

1. Where to Begin?

Biblical studies of Creation customarily start with the Bible's opening words: "In the beginning God created the heavens and the earth" (Gen 1:1).¹ These studies take up the issue of whether this statement encompasses the creation of the universe or is meant to apply only to our planet. Then, in conjunction with the words that follow in Genesis – "Now the earth was formless and empty, darkness was over the surface of the deep, and the Spirit of God was hovering over the waters" (v. 2) – they consider whether this account allows for the possibility of the earth's having already been in existence.

After this foundational examination of the text, further inquiries focus on the meaning of the "days" of Genesis 1 (vv. 5, 8, 13, 19, 23, 31), that is, whether the Hebrew term used, *yôm*, signifies a literal twenty-four-hour day, or whether it can possibly indicate a longer period. Additional studies take up the relation between the creation of light on the first day (vv. 3-5) and the creation of the sun and moon on the fourth day (vv. 14-19). A related question concerns the cryptic statement "He also made the stars" (v. 16). Is this to be understood as a parenthetical aside, or does it indicate that creation of the stars is to be included in the divine activities of the fourth day?

Moving beyond the first chapter of Genesis, the relation of its account of the creation to the one that follows immediately in chapter 2 demands attention. How are these two passages to be understood – as separate or complementary accounts? The question carries major weight for the interpretation of the biblical narrative. Commencing the study of creation with Genesis makes good sense. It begins where the Bible begins and establishes the agenda for debate with those who argue for a different view of origins.

But is Genesis indeed the best place to begin? For the Christian it is not. The New Testament recognizes a beginning prior to the "in the beginning" of Genesis 1:1. The opening words of the Fourth Gospel point us to this ultimate beginning: "In the beginning was the Word, and the Word was with God, and the Word was God. He was with God in the beginning" (John 1:1-2).

Before time, God the Word.

Before the Genesis 1 beginning, God the Word.

Before the universe, God the Word.

Is not this the place to begin, with the One who is eternal, who has no beginning and no end, in whom is "life original, unborrowed, underived"?² And then we read on:

Through him all things were made; without him nothing was made that has been made. In him was life, and that life was the light of men. The light shines in the darkness, but the darkness has not understood [or, overcome] it (vv. 3-6).

Here is the Creator, the Word, who speaks order out of chaos, speaks light out of darkness, speaks the visible out of the invisible, speaks into being something out of nothing. Apart from the Word – nothing.

Christ and Creation: Implications of a Christocentric Understanding

Through the Word – everything. This is where we must begin, with the Word who creates all.

The text rushes on to an even more startling development, one that ancient (and modern) philosophy cannot encompass:

The Word became flesh and lived for a while among us. We have seen his glory, the glory of the one and only [Son], who came from the Father, full of grace and truth. . . . For the law was given through Moses; grace and truth came through Jesus Christ. No one has ever seen God, but God the only [Son], who is at the Father's side, has made him known (vv. 14, 17-18).

Would we seek to understand the world, the universe? We must look first to the One who brought it all – *all* – into being. We must study to discover what he is like, and in light of that knowledge turn to investigate the works of his hands. This chapter therefore develops a thesis that seems disarmingly obvious but is easily overlooked: *the proper study of creation begins with the Creator, Jesus Christ*. Jesus – what he is like and how he acts – must inform our study of all the data, whether from the Bible or from the natural world.

For the followers of Jesus – they for whom he is Savior and Lord – he is not, cannot be, just another piece in the puzzle of humanity and its origins. He is not, cannot be, the Omega Man at the summit of the evolution of the race. He is the *Arche*, the origin of all. He is the First and the Last. He is the One from whom the entire universe came into being and to whom it will return to own him as King of kings and Lord of lords. Only in the light of Jesus Christ can we take up the controversy between creation and evolution. And in his light the issues emerge with startling clarity.

2. The Life and Teachings of Jesus

The first and most obvious conclusion to be drawn from a study of the Gospels is that Jesus presupposed the validity of the Genesis account of Creation. When Pharisees came to test him by raising the question of divorce, he replied: "Haven't you read that at the beginning the Creator 'made them male and female,' and said, 'For this reason a man will leave his father and mother and be united to his wife, and the two will become one flesh?' " (Matt 19:4-5; cf. Mark 10:6-7). In his answer Jesus alluded to the narrative of man's creation in Genesis 1:27 and quoted verbatim the Creator's words concerning marriage in Genesis 2:24.

Again, speaking to his disciples about signs of the end time, he stated that "those will be days of distress unequalled from the beginning, when God created the world, until now" (Mark 13:19). On several other occasions Jesus referred to the creation or beginning of the world (Matt 25:34; Luke 11:50; John 17:24). Jesus' view of the world was a positive one. His favorite term for God was "Father," and he used it to indicate God's relationship not only to humans but to the creation:

"Look at the birds of the air; they do not sow or reap or store away in barns, and yet your heavenly Father feeds them. Are you not much more valuable than they? . . . And why do you worry about clothes? See how the lilies of the field grow. They do not labor or spin. Yet I tell you that not even Solomon in all his splendor was dressed like one of these. If that is how God clothes the grass of the field, which is here today and tomorrow is thrown into the fire, will he not much more clothe you, O you of little faith?" (Matt 6:26-32).

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In these words Jesus goes beyond the Genesis 1 account. There, at the end of Creation week, God pronounced everything “very good” (Gen 1:31). Here God watches over his creation, lovingly caring for it in all its aspects, providing for its needs like a loving, earthly parent with his or her child.

Jesus was no ascetic. In Jerusalem he was a popular dinner guest who enjoyed the meal and led the conversation. Endeavoring to fault him, his adversaries accused him of being a lush and a glutton. He did not teach his disciples to fast as did John the Baptist and the Pharisees. For Jesus, the world was good, made by God for man’s enjoyment. Not surprisingly, his first miracle came at a wedding feast when the wine ran out (Matt 9:14-15; 11:18-19; John 2:1-11).

But all is not goodness and light in this world. There is a dark side: Jesus was acutely aware of sorrow, tragedy, danger, disease and death. He spent most of his time in a healing ministry, preaching good news to the poor, proclaiming freedom to the prisoners, recovery of sight for the blind and release for the oppressed (Luke 4:18-19; cf. Isa 61:1-2).

What happened to mar the original creation? Jesus did not reveal the answer. In one of his parables, however, he perhaps gave a clue. In the story of the weeds that grew up with the wheat, he said, “An enemy did this” (Matt 13:28). When his disciples asked him about a man born blind “ ‘Rabbi, who sinned, this man or his parents, that he was born blind?’ he replied, ‘Neither this man nor his parents sinned, but this happened so that the work of God might be displayed in his life’ ” (John 9:1-3). Then, shelving for the moment the question of evil, he proceeded to restore the man’s sight.

Jesus was keenly aware of demonic forces that opposed his work. His ministry of healing, liberation and restoration encountered stern opposition in both natural and supernatural spheres. On one hand, the religious leaders of the day viewed him as a threat and plotted to destroy him; on the other, the powers of darkness that had enslaved men and women fought to retain their hold on their victims. For Jesus, Satan was an all-too-real sinister being who exercised power in the world. If the heavenly Father watched over his creation, Satan had been given access and authority as the “prince of this world” (John 12:31; 14:30; 16:11).

In the ministry of Jesus, however, a new day was dawning, one that would break the yoke of Satan and at length restore the whole creation to its original purpose. The “kingdom of God” had begun. Wherever men and women accepted the Lordship of Jesus, the reign of God already was present. “The kingdom of God is within you,” he said (Luke 17:21). “The Son of Man came to seek and to save what was lost” (Luke 19:10). In the work of Jesus a new order of society was being born. It would bring a new hope, a new people and a new creation. It was already here – it had begun – but only at the *eschaton* would it be fully realized, when God’s will would be “done on earth as it is in heaven” (Matt 6:10).

The hallmark of this kingdom was a marvelous quality utterly outside all the religions that the world ever saw – grace. Grace flowed from a God infinitely merciful and kind, who spared no effort to unite lost men and women to himself. Grace involved a new type of righteousness, one that so far surpassed that of the scribes and Pharisees (Matt 5:20) that humanity could never attain it through their own efforts. This righteousness was not earned – it was given; it was not deserved – it came as a gift. Entry into the kingdom of heaven was not by human effort – it was freely granted to everyone regardless of status, race, gender or reputation, who was “poor in spirit” (v. 3). All, that is, who felt and acknowledged their need. In this kingdom where God rules the heart, the ambition, jealousy

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and self-seeking that characterize human interaction on this earth have no part. Not by force, not by scheming, not by favoritism, not by putting others down, not by brute strength that claws upward on the shoulders of the weak, crushing them under – not by such means does God’s kingdom grow and spread.

The relationship of Jesus to death is especially instructive. Three times in the Gospels we find him in the presence of a corpse: the daughter of Jairus (Mark 5:35-43), the widow’s son outside the town of Nain (Luke 7:11-15) and his friend Lazarus (John 11:38-44). Each time Jesus brings the dead person back to life. The raising of Lazarus is the most startling of these miracles because his friend had been dead and buried for four days. Before Jesus raises Lazarus he weeps, identifying himself with all mourners. For Jesus, death was not something positive, certainly not a necessary component of God’s creation. Jesus broke up every funeral he attended.

And, in the incredible climax to Jesus’ incredible life and ministry, he himself entered into the experience of death and broke it up. All four Gospel accounts devote disproportionate treatment to the closing events of Jesus’ life, and all unequivocally affirm that he died on a cross, was buried and rose again from the dead. Far from these facts being viewed as embarrassing – a leader who was executed by the Romans! – they became a focal point of the new religion that broke upon the world with Jesus’ resurrection. Death had been conquered!

Thus, the life and teachings of Jesus are of the utmost importance to the question of origins. They not only inform our understanding of creation but also of the great controversy between good and evil, Christ and Satan. In their light we begin to grasp how God’s original creative intentions have been undermined through the entrance of sin and death, and also how Christ’s life and death counteract and reverse the Satanic processes of evil and death.

3. A Christological Understanding of Creation

Looking beyond the Gospels, we find throughout the New Testament Creation accepted and proclaimed as the origin of the world and of humanity. Spelling out such Creation references in full allows us to experience their cumulative effect:

“Turn from these worthless things to the living God, who made heaven and earth and sea and everything in them” (Acts 14:15); “the God who made the world and everything in it is the Lord of heaven and earth” (Acts 17:24); “Worship him who made the heavens, the earth, the sea, and the springs of water” (Rev 14:7); “you created all things, and by your will they were created and have their being” (Rev 4:11).

The principal word employed by the New Testament writers in discussing origins is the Greek *ktizo* and its cognates, a word that expresses the absolute sovereignty of God. We find no references whatsoever to a word used in Greek literature in discussions of origins – *demiurgo*. This latter word describes a shaping of the world from preexisting matter and was used, for example, in Gnostic writings that attributed our world to a lesser deity, the *demiurge*.

Thus, the New Testament reiterates the record of Genesis: the world was created *ex nihilo* by God. It also underlines the basic goodness of the world, rejecting any tendency toward asceticism: “For everything God created is good and nothing is to be rejected if it is received with thanksgiving”

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(1 Tim 4:4). And although the creation in its present state is marred, it nevertheless reveals God. Humans who stubbornly refuse to believe stand condemned because they do not acknowledge what God has made plain through his created works:

The wrath of God is being revealed from heaven against all the godlessness and wickedness of men who suppress the truth by their wickedness, since what may be known about God is plain to them, because God has made it plain to them. For since the creation of the world God's invisible qualities—his eternal power and divine nature—have been clearly seen, being understood from what has been made, so that men are without any excuse (Rom 1:18-20).

In this affirmation of the creation as a revelation of God, Paul echoes a constant refrain of the Old Testament, particularly in Psalms (Psa 19:1-6; etc.).

The New Testament writers take a big step beyond the Old Testament, however, in the place they assign to Jesus Christ in the issue of origins. They view creation Christologically, with Jesus understood as not only the source of the world but of the entire universe. We have already noticed John 1:3-4: "Through him all things were made; without him nothing was made that has been made. In him was life, and that life was the light of men." This passage does not stand alone; it is one of several that make Jesus the center of any discussion of origins. The transcendent words of the apostle Paul, perhaps quoting an early Christian hymn, ring with praise to Christ as the Creator of all things:

He is the image of the invisible God, the firstborn over all creation. For by him all things were created: things in heaven and on earth, visible and invisible, whether thrones or powers or rulers or authorities; all things were created by him and for him. He is before all things, and in him all things hold together (Col 1:15-18).

The word translated "firstborn," *prototokos*, is found in several other places in the New Testament (Luke 2:7; Rom 8:29; Col 1:18; Heb 1:6; 11:28; 12:23; Rev 1:5). In one place it refers to the literal firstborn child (Luke 2:7), but in all other occurrences it signifies Christ's supremacy. Its two uses in Colossians 1 (vv. 15, 18) indicate Christ's supremacy, first over creation and then over death. In the words of another, "As Christ from all creation bears the rank of *prototokos* in relation to every creature, so He does also and especially as the risen Lord."³

Colossians 1:15-18 makes the following affirmations concerning Christ:

1. He is supreme over all creation.
2. By him everything was created in heaven or on earth – the universe, in other words.
3. Everything was created for him: he is the purpose of the creation.
4. He existed before all: he is first, not only in authority but in time.
5. All things hold together in him.
6. He is the *Arche*, the beginning.

For the person who believes in Jesus Christ, these ringing affirmations must be determinative in shaping their view of the origins of this world and life on it.

Other New Testament passages reiterate these affirmations in part or in whole:

In these last days he has spoken to us by his Son, whom he appointed heir of all

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things, and through whom he made the universe. The Son is the radiance of God's glory and the exact representation of his being, sustaining all things by his powerful word (Heb 1:2-3).

Yet for us there is but one God, the Father, from whom all things came and for whom we live; and there is but one Lord, Jesus Christ, through whom all things came and through whom we live (1 Cor 8:5-6).

These are the words of the Amen, the faithful and true witness, the ruler [*Arche*] of God's creation (Rev 3:14).

This emphasized Christological perspective on creation is further developed in two aspects – the new creation in Christ, and the restoration, or recreation, of all things made possible by the work of Christ.

Central to the New Testament proclamation of the gospel is the teaching that in Christ God already has inaugurated his kingdom, which is a new creation just as much as was the original one. It is stated frequently:

For we are God's workmanship, created in Christ Jesus to do good works (Eph 2:10).

For he himself is our peace, who has made the two [Jew and Gentile] one and has destroyed the barrier, the dividing wall of hostility, by abolishing in his flesh the law with its commandments and regulations. His purpose was to create in himself one new man out of the two, thus making peace, and in this one body to reconcile both of them to God through the cross (vv. 14-15).

Put on the new self, created to be like God in true righteousness and holiness (Eph 4:24).

For God, who said, "Let light shine out of darkness," made his light shine in our hearts to give us the light of the knowledge of the glory of God in the face of Christ (2 Cor 4:6).

Put on the new self which is being renewed in knowledge in the image of its Creator. Here there is no Greek or Jew, circumcised or uncircumcised, barbarian, Scythian, slave or free, but Christ is all, and is in all (Col 3:10-11).

If anyone is in Christ, he is a new creation; the old has gone, the new has come! (2 Cor 5:17).

Neither circumcision nor uncircumcision means anything, what counts is a new creation (Gal 6:15).

It is surely impossible to miss this consistent, repeated New Testament emphasis on the new creation in Christ.

While this new creation, made manifest in the transformed lives of believers and in the church,

which is Christ's body where barriers of race, gender and status have been abolished, is a present reality, it is not yet realized in its fullness. The best is yet to be. The new creation is a promise and foretaste of the consummation when there will be a new heaven and a new earth free from sorrow, pain, evil and death (Rev 21:1-4). Then all creatures in heaven and on earth will unite in praising the Creator: "You are worthy, our Lord and God, to receive glory and honor and power, for you created all things, and by your will they were created and have their being" (Rev 4:11).

The whole creation, now marred and blighted will, as Paul affirmed, be restored to its original purpose:

The creation waits in eager expectation for the sons of God to be revealed. For the creation was subjected to frustration, not by its own choice, but by the will of the one who subjected it, in hope that the creation itself will be liberated from its bondage to decay and brought into the glorious freedom of the children of God. We know that the whole creation has been groaning as in the pains of childbirth right up to the present time (Rom 8:19-22).

Thus does the New Testament place Jesus Christ at the heart of its understanding of origins. He is the *Arche*, the Beginning; and he is the Amen. He is the New Man, foreshadowed by Adam (Rom 5:12-14; 1 Cor 15:21-22), and he is the One who at last, "crowned with glory and honor [with] everything under his feet" (Heb 2:6-9; cf. Psa 8:4-6), will be the end of all creation. Again, in the words of Paul: "When the times have reached their fulfillment [God will] bring all things in heaven and on earth together under one head, even Christ" (Eph 1:10). This pervasive New Testament Christological view of the universe has profound repercussions for current theories of origins. To these theories we now turn.

4. Implications for Theories of Origins

Theories of origins are only that – theories. While all present various lines of argument, all, because of the nature of the subject, lack final proof. All attempt to move back in time from the *is* to the *was* – especially to the first *was*. The various theories of origins current today may be grouped into three broad categories: naturalism, supernaturalism and modified naturalism. How does each fare in light of the Christological perspective that permeates the New Testament view of beginnings?

Naturalism. A thoroughgoing naturalism sees the universe as a closed system of cause and effect in which everything, including origins, is to be understood as wholly proceeding from natural causes. God has no place in this schema, since he is considered to be unnecessary and irrelevant. One of the clearest statements of thoroughgoing naturalism and its implications was made by the atheistic philosopher-mathematician Bertrand Russell more than a century ago. In his essay "A Free Man's Worship," written in 1902, he wrote:

That Man is the product of causes which had no prevision of the end they were achieving; that his origin, his growth, his hopes and fears, his loves and his beliefs, are but the outcome of accidental collocations of atoms; that no fire, no heroism, no intensity of thought and feeling, can preserve an individual life beyond the grave; that all the labors of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar

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system, and that the whole temple of Man's achievement must inevitably be buried beneath the debris of a universe in ruins – all these things, if not quite beyond dispute, are yet so nearly certain, that no philosophy which rejects them can hope to stand. Only within the scaffolding of these truths, only on the firm foundation of unyielding despair, can the soul's habitation henceforth be safely built.⁴

Today, this nihilistic theme is promoted in militant fashion by many atheists, including Richard Dawkins, Christopher Hitchens, Sam Harris and Daniel Dennett. Their view of origins is the exact opposite of the Bible's Christocentric emphasis. On the other hand, Antony Flew, who for many years argued persuasively against belief in God, reversed course late in life.⁵

How, then, did Western thought, heavily influenced by the Scriptures and the Protestant Reformation, undergo such radical change? The answer is complex, deserving of a study in its own right. Here we will note just three key factors: the development of the "scientific method," the impact of critical scholarship on faith in the Bible, and the influence of ideas from philosophy and psychology.

One of the outcomes of the Enlightenment was the development of the "scientific method." Students of nature discovered that the world could be investigated on its own terms, without reference to the Bible or the supernatural. Nature operated according to fixed norms or laws that could be uncovered through careful observation and experiment. From the stars in their courses to the human cell and the atom, the universe was an open book to be read and understood by those who adopted the right approach. Of itself, the scientific method is neutral toward the supernatural: it neither affirms nor denies it. But it does not require the supernatural as a factor in its investigations, and thereby opens a door to those who, for whatever reasons, wish to deny it.

Another offspring of the Enlightenment was the rise of critical study of the Bible. This development may be viewed as an extension of the scientific method to the field of sacred literature. Just as that method approaches its tasks without reference to the supernatural, so critical Bible scholarship comes to the Scriptures as human documents to be analyzed and understood in the same way that other ancient writings are studied. Considerations of supernatural interventions are bracketed off as being outside the purview of this applied scientific method.

Thus, in due course a thoroughgoing historical-critical approach to the Bible came to dominate scholarly studies. Just as the scientific method viewed the universe as a closed system of cause and effect operating by natural law, so the events of Scripture were to be understood in terms of history as a closed continuum of cause and effect, with no place allowed for the supernatural. Belief in miracles, in the virgin birth, in the Resurrection – all perforce were now excluded. And with them, of course, the biblical account of creation by divine fiat.

The inexorable train of critical analysis reached to the very founder of Christianity, to Jesus himself. During the nineteenth century biblical scholars concentrated their efforts on the carpenter from Nazareth, endeavoring to reconstruct his self-understanding. The result was a series of "lives" of Jesus that, focusing on his humanity, presented a succession of portraits that merely reflected the images of the respective writers. Thus was the divinity of Jesus stripped away. The Jesus Seminar of recent years has attracted widespread coverage in the popular media and continues this line of approach.

Yet another line of attack on Christianity arose as other scholars scrutinized the nature of religion itself. Ludwig Andreas Feuerbach (1804-1872) argued that the concept of God is a projection of our

own consciousness – theology is really anthropology. Sigmund Freud (1856-1939) set forth religion as an illusion, a wish fulfillment that people very much wanted to be true. The work of Feuerbach and Freud, along with others, thus accounted for religion on wholly natural terms, in the same way that Darwin explained the world and its origins on wholly natural terms.

If we were to go back in time some three hundred years, we would find a world in which God and the supernatural were taken for granted. Today's world stands in radical contrast, as for large numbers of people God and the supernatural are either excluded or pushed to the periphery. In spite of the widespread influence of a naturalistic understanding of the world, that view faces two major flaws in its schema: it ultimately cannot account either for the existence of the universe or for the overwhelming evidence of its design.

Naturalism pushes thought back further and further to the big bang or some other point of beginning. But as to how *that* beginning came to be – where the materials involved came from – it is silent. In reality naturalism has no coherent explanation of origins. Nor can it account for the incredible complexity of the universe, for the astronomical odds that are involved in positing that everything happened wholly by chance. Phillip Johnson, professor emeritus of law at the University of California at Berkeley has, among others, convincingly argued the case for rejecting naturalism in any of its contemporary garbs as the basis for understanding origins.⁶

Supernaturalism. The supernatural view of origins posits that there is a God and that he is the source of all. And although God is above and behind nature, on occasions of his choosing he intervenes through acts that to us are miracles. Further, God is a God of law, both moral and natural. All his laws are open to study and investigation by human beings who bear his image, at least in part. Thus, the supernatural view of origins is not opposed to science, nor does it disparage science. God reveals himself through his created works as well as through the Scriptures:

Since the book of nature and the book of revelation bear the impress of the same master mind, they cannot but speak in harmony. By different methods, and in different languages, they witness to the same great truths. Science is ever discovering new wonders; but she brings from her research nothing that, rightly understood, conflicts with divine revelation. The book of nature and the written word shed light upon each other. They make us acquainted with God by teaching us something of the laws through which he works.⁷

God created and God creates: God and creative activity are inseparable. Whether or not creation is ongoing in the physical universe is a question to which no definite answer can be found in the Bible. Apart from the cosmos, however, God's creative activity continues in human lives. As men and women yield themselves to his loving control, God makes them new. "I will give you a new heart and put a new spirit in you" (Ezek 36:26). "If anyone is in Christ, he is a new creation; the old has gone, the new has come!" (2 Cor 5:17).

For the believer in Jesus, creation and redemption are conjoined, inseparable. The One who has shined into his heart the glorious light of the gospel is the One who in the beginning commanded: "Let there be light" (Gen 1:3; 2 Cor 4:6). Although some of the evidence from the natural world confronts us with puzzling and difficult problems, the bottom line is this: *the believer knows the Creator and has been re-created in and through him.*

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When one's worldview centers in Jesus Christ, the stance toward nature is radically different from that of the nonbeliever. For the believer, the world in the beginning as it came from the Creator's hand was "very good." Although marred by results of the Fall, it is still good. It is the world where the Father watches over even the sparrow that falls to the ground, and where he clothes with beauty the wild flowers of the field. " 'God is love,' is written upon every opening bud, upon every spire of springing grass."⁸

Contrast this attitude with that of the nonbeliever, whose perspective does not extend to include the supernatural. For him, nature is a struggle in which the strong survive and the weak, whether animal or human, perish. Nature is red in tooth and claw, as the writer Jack London, among others, vividly described in his books *The Call of the Wild* and *White Fang*. These contrasting attitudes toward nature cannot be reconciled.

Thus, the question of origins raises issues of heavy significance that reach far beyond the Sabbath. Ultimately, the trustworthiness of the Bible as divine revelation is at stake, and beyond that God himself and Jesus as our Creator, Savior and Lord.

Modified Naturalism. The biblical picture of origins is clear and consistent throughout: creation by divine fiat in the relatively recent past. However, evidence from several scientific disciplines runs counter to this biblical scenario. Discoveries in paleontology, geology and biology seem to point to a process of evolution from simple forms to more complex ones over a period of billions of years, with man – *Homo sapiens* – emerging gradually over hundreds of thousands of years.

Persuaded by this data from the natural world, many Christians now argue for a modified naturalism, either theistic evolution or evolutionary creation. These concepts, which are similar, assert that the classical religious teachings about God and creation are compatible with modern scientific understanding of biological evolution. They hold that there is a God who employed evolution to develop life within the universe that he created. A variation of the concept argues that God is the Creator of human life by acting to implant the soul in a body that was formed either through naturalistic evolution or divinely guided evolution.

This topic calls for extended treatment beyond the purview of this chapter. Here we will simply note how the case is made by three prominent Christian thinkers: Pierre Teilhard de Chardin, C. S. Lewis and Francis S. Collins. After briefly reviewing their positions, we shall critique them in light of the Christological understanding of origins that we established above.

De Chardin (1881-1955) was a French philosopher and Jesuit priest who trained as a paleontologist. He took part in the discovery of the so-called Peking Man. His primary book, *The Phenomenon of Man*, presented a dynamic view of the cosmos. He argued that our species occupies a special place within a spiritual universe and that it is evolving toward an Omega Point as the final goal:

Is evolution a theory, a system, or a hypothesis? It is much more: it is a general condition to which all theories, all hypotheses, all systems must bow and which they most satisfy henceforth if they are to be thinkable and true. Evolution is a light illuminating all facts, a curve that all lines must follow. . . . The consciousness of each of us is evolution looking at itself and reflecting upon itself. . . . Man is not the center of the universe as once we thought in our simplicity, but something much more wonderful – the arrow pointing the way to the final unification of the world in terms of life.⁹

The famous twentieth-century apologist for Christianity, Oxford don C. S. Lewis, posited humanlike creatures evolving and at a certain point in history God bestowing special spiritual gifts on those that had developed the necessary characteristics. By this divine act *Homo sapiens* was endowed with the image of God and the ability to know and experience evil – with tragic consequences:

For long centuries God perfected the animal from which was to become the vehicle of humanity and the image of himself. He gave it hands whose thumb could be applied to each of the fingers, and jaws and teeth and throat capable of articulation and a brain sufficient to execute all the material motions whereby rational thought is incarnated. . . . Then in the fullness of time God caused to descend on this organism, both on its psychology and physiology, a new kind of consciousness which could say 'I' and 'me', which could look upon itself as an object, which knew God, which could make judgments of truth, beauty and goodness, and which was so far above time that it could perceive time flowing past. . . . We do not know how many of these creatures God made, nor how long they continued in the Paradisal state. But sooner or later they fell. Someone or something whispered that they could become gods.¹⁰

Francis S. Collins is not only one of the world's leading scientists but is also a committed Christian who, in public presentations and writings, makes no secret of his faith. In *The Language of God*,¹¹ he argues for both Darwinian evolution and a transcendent Creator. Asserting that Darwinism is no threat to Christianity, he claims that it explains better a range of physical evidence than either creationism or intelligent design.

Collins's argument contains a striking inconsistency. On one hand, his discussion of cosmology and the origin of the universe powerfully points to a degree of fine-tuning for which a Designer is the most logical explanation. On the other hand, in treating human evolution he dismisses all attempts to factor in the divine, either as an overarching principle or at specific moments of intervention in the development of new species.

Nevertheless, according to Collins, God acted at a particular point in time some fourteen billion years after the origin of the universe to invest the humanlike creature with an immortal soul that evolution could not instill. Arguing from humanity's sense of morality, Collins contends "humans are also unique in ways that defy evolutionary explanation and point to our spiritual nature."¹²

The Language of God leaves the Bible-believing Christian with mixed feelings. In places the work is deeply inspirational as Collins expresses his belief in God as the Creator behind the big bang and our humanity, made in his image – along with the Fall, Christ's saving atonement, miracles and the Resurrection. But between the big bang and "Adam," blind materialism holds sway, with death, failure and mayhem.

We have briefly set forth the views of these three influential thinkers who have attempted to harmonize evolution with their faith and with the biblical record. How well do their views stand up when exposed to the litmus test of biblical Christocentricity? In my judgment, they are found wanting on at least seven counts:

1. *Scripture*. All theories of origins that attempt to harmonize the Bible with evolution are forced to treat the Genesis account of Creation as figurative. This account, however, forms the foundation of the entire Scriptures. The God of the Bible creates by fiat *ex nihilo*. And in the New

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Testament that God is identified with Jesus Christ. Attempting to accommodate evolutionary theory entails far more than adjusting one's understanding of Genesis; it reorients one's perspective on the entire Bible. It calls into question the affirmation that Christ is in fact the Creator.

2. *The Character of Christ.* The Bible's portrayal of God underscores his faithfulness. He is the Lord who does not change (Mal 3:6), who keeps covenant, whose word cannot, will not fail. In the New Testament Jesus Christ is "the same yesterday and today and forever" (Heb 13:8). Although all others prove to be unfaithful, "He will remain faithful, for he cannot disown himself" (2 Tim 2:13).

Evolution challenges this biblical given. It demands long ages in which species develop and perish, in which the strong survive and the weak are crushed, in which rapacious creatures roam the earth, in which nature operates by force and by chance. This scenario cannot be reconciled with the picture of God that Jesus Christ gave us through word and life. A caring, loving, merciful God cannot be brought into harmony with a Creator whose work exhibits the opposite of that character.

3. *Sin and Evil.* Theistic evolution, since it is essentially evolutionary in its thinking, ignores the reality of sin and evil and the great controversy between Christ and Satan. Yet in this fundamental concept is contained the answer to the apparent conflict between a Creator God of love and a world in which sin, evil and suffering prevail, including predation in the animal kingdom, a problem recognized by thinking Christians and often pointed out by unbelievers.

4. *Death.* In Jesus' life and teachings, death is an intruder, an enemy. Death is the final foe that God at last will remove from the universe. But in evolutionary thought death is neither an intruder nor an enemy – *death is necessary!* Only through death can new species arise.

5. *Adam.* In the New Testament Christ is the second Adam who, reversing the results of the Fall, recovers all that was lost by the first Adam (Rom 5:12-21). For evolution, however, "Adam" is not an individual formed by God from the dust of the earth but a vague figure that appears at the end of a long period of upward progression.

6. *The Work of Christ.* The metanarrative of Scripture, taken as it reads, is straightforward. God creates a perfect world but mankind, made in the divine image, messes up. Their disobedience introduces ruin and death, not only to man, but to the world. However, God does not leave man in hopeless despair: he intervenes, sending his Son to live among humanity and at last to die on the cross, taking humanity's woes upon himself and bringing liberation from both sin and death.

The metanarrative of evolution posits original imperfection, not perfection. It portrays not loss but gain, not fall but growth. Man is not created in God's image but is the end product of long ages of slow development. Even if one suggests that the divine element is guiding the evolutionary process or intervening at a point in time to implant a soul, the scenario fits very poorly with the biblical metanarrative.

7. *Dualism.* The theories of Teilhard de Chardin, Lewis and Collins are all based on theology that runs counter to biblical teaching. De Chardin's views embody a cosmic mysticism that sees God and nature in a creative relationship of progressive evolution. Both Lewis and Collins presuppose a dualism of body and soul, wherein God implants a soul into the body or bodies of selected apeline creatures at a specific point in time.

Concluding Reflections

The Christocentric approach to the issue of origins moves, like science, from the known to the

unknown. Like science, its data can be replicated. The follower of Jesus Christ knows him as Savior, Lord and Creator; anyone who chooses may also gain that experiential knowledge. The believer knows Jesus as Creator from two sources: the testimony of Scripture and the testimony of the Spirit in the heart. “Anyone who believes in the Son of God has this testimony in his heart” (1 John 5:10).

The question of origins boils down to either naturalism or supernaturalism. It is common today to attribute belief in the supernatural – miracles, divine guidance and intervention and prayer that changes the course of events – to a prescientific mode of thinking. But to accept the supernatural is by no means outmoded or prescientific. The supernatural envelopes the natural and those who are open may discern its manifestations.

Evidence for the supernatural arises from two sources: the believer’s experience of God and happenings for which no natural explanation can be adduced. The person who believes in Jesus Christ, for whom he is Lord and Savior, knows him as the Risen One who has brought peace, deliverance and joy. And he or she is not surprised to read accounts like that of Brother Yun in China, for whom prison doors open and the prayers of fellow believers bring about seemingly impossible occurrences.¹³

For Brother Yun and other Christians in China, the stories of the book of Acts do not belong to an age long gone; they live again and are repeated in everyday experience. Supernatural and natural intersect, flow together, are part of the one whole in Jesus Christ who is Creator and Sustainer of life and the universe. In the light of Christ as Creator, evolution, whether understood as wholly naturalistic or as naturalism modified by divine guidance or intervention, is inadmissible because it runs counter to the life and teachings of Jesus.

Whatever theory of origins one assumes, problems remain. The supernatural approach derived from the Bible is not placed at a disadvantage beside other theories; indeed, because of its certainty stemming from knowing the Creator, it may have advantages. Nevertheless, it must face squarely data from the natural world that puzzle and trouble.

Our knowledge of the distant past – that is, of prehistory – is very limited. The first eleven chapters of Genesis provide but a sketch, an outline, that leaves tantalizing issues unanswered. Among these are the following: the origin and demise of the dinosaurs and other creatures that seem monstrous to us; existence without death; the power given to Satan as “prince of this world” (John 12:31; 14:30; 16:11) to intervene in and to manipulate natural processes, and the extent to which he has engaged in such activities; and the effects of a worldwide flood on geology and paleontology.

Reflection on origins inevitably is accompanied by an existential dimension. One cannot take it up without facing the biggest questions of human existence: Who am I? Where did I come from? Where am I headed? Is there meaning to my life? At this level the answers that result from evolutionary theory fall woefully short. It is not surprising, therefore, that after a century of teaching evolution in the public schools of the United States, the majority of people have not embraced the theory. In their innermost being they sense its inadequacy.

I sense its inadequacy. In those aspects that make me most human – in worship, in morality, in appreciation of the beautiful – I know within myself that I am a child of Christ the Creator, made in his image.

Christ and Creation: Implications of a Christocentric Understanding

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Chapter 11

INTELLIGENT DESIGN: EVIDENCE FROM MOLECULAR BIOLOGY

Timothy G. Standish

“Intelligent design” is a relatively recent phrase, describing a concept that first appeared openly in the origins debate in the 1980s. It recognizes the strength of the evidence for design in the natural world and underlines the serious weaknesses inherent in evolutionary theory. Much of the evidence underpinning intelligent design (ID) has only become clear as scientific knowledge has grown in recent decades. It is also true that some of the basic concepts have been articulated since at least the 1960s, notably Michael Polanyi’s argument that “machines are irreducible to physics and chemistry” and that “mechanistic structures of living things appear to be likewise irreducible,”¹ and Michael Denton’s influential book, *Evolution: A Theory in Crisis*, published in 1985. Almost from the beginning ID has been the target of sustained attack from those committed to neo-Darwinian evolutionary theory, a fact in itself that should perhaps alert us to the strength of the intelligent design arguments and the challenge they create for neo-Darwinism.

A good working definition of ID is that it holds “it is possible to infer from empirical evidence that ‘certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.’ ”² In this chapter we discuss briefly the current debate over ID, emphasize two of the most compelling arguments in favor of intelligent design from molecular biology – irreducible complexity and specified complexity – and draw attention to the weaknesses in the main arguments brought against them by some contemporary neo-Darwinists. We also point out that ID *per se* is not precisely the same as biblical creationism, although clearly related to it, and suggest in conclusion an appropriate Christian response.

Is Design Detectable?

Intelligent design asks a very simple question: Is it possible to detect intelligent design if the designer is unknown? The answer is equally simple, Yes. Doubts only seem to arise when this question is asked of nature. Is it possible to detect intelligent design in hieroglyphics? Yes. Is it possible to detect intelligent design in flint arrowheads? Yes. Is it possible to detect intelligent design in radio signals from space? Participants in the Search for Extraterrestrial Intelligence program (SETI) certainly hope so. Is it possible to detect intelligent design in DNA encoded information within cells and the elegantly complex molecular machines it codes for? Recently *Wired* magazine³

confirmed this is possible by reporting the deciphering of hidden messages encoded in a synthetic genome created by the Venter Institute or “Institvte” as it was spelled out using DNA codons.* In almost any possible place where intelligent design might be detected, its detection causes little controversy except when it comes to nature.

If design is detected in nature, it seems only logical to ask, Who is the designer? Some people are very uncomfortable with what the answer may be, unless the designer is already known and is not God. As Craig Venter and other scientists at the Venter Institute are definitely not gods, the discovery that they had engineered a message into an organism’s genome was relatively uncontroversial. If someone discovered a message in human DNA that said “Created by the Lord God Almighty,” reactions would probably have been dramatically different.

The question intelligent design asks does not suggest that a message like this is likely or unlikely to be discovered. In fact, it does not directly address the question of God’s existence at all because it is not equipped to do so. And yet ID remains controversial. Those committed to a materialistic philosophy believe that the scientific study of intelligent design is unacceptable because it frequently denies the materialistic neo-Darwinian explanation of the origin of the universe and life on earth.

Christians who believe the Bible do not operate within the constraints of those who choose materialism as their belief system. A reasonable reading of the Bible suggests that design is evident in nature (*e.g.*, Rom 1:20), but also recognizes that chance and natural laws operate in the universe and that these may explain much of what occurs.⁴ The philosopher and mathematician William Dembski has formalized a conceptual filter for differentiating products of intelligence from those that are accounted for by laws or chance or some combination of the two. Dembski’s filter is illustrated in figure 1. The hallmarks of intelligent design that Dembski recognizes are a combination of specification and complexity.

Complexity is related to probability: the more complex something is, the less probable it is. Most people are familiar with probability and complexity, but specification seems more subtle. The cylinders and pistons in an internal combustion engine are an example of specification. The metal from which these engine parts are formed may be molded into almost any conceivable shape, but in reality they fit together in such a way that engines work. There is no natural law that causes iron to form cylinders or pistons or dictates that they should fit to a tolerance of several micrometers. They fit together because they were designed to do so by intelligent engineers with the intention of making a workable engine.

In real life, Dembski’s criteria for identification of phenomena that involved an intelligent cause may not work perfectly. An interesting example of this occurred in a widely reported incident in 2005/early 2006 when a fake rock was apparently used by British intelligence agents to conceal a spy communication device in Moscow.⁵ Intelligence agents commonly attempt to mimic the products of chance and laws for their own reasons. Sometimes they may be successful on first inspection, but this is not as easy as it may seem. For example, when asked to mentally generate a sequence of heads and tails instead of flipping a coin to do so, the attempted random sequence can generally be differentiated from a genuinely random sequence.

Another problem is that unguided nature using only chance and natural laws may occasionally

* A codon is a sequence of three adjacent bases (nucleotides; see definition on page 159) along a DNA molecule that designates a specific amino acid.

produce shapes that, with a little imagination, resemble designed objects. In *Hamlet*, Shakespeare noted this phenomenon in the following dialogue between Hamlet and Polonius:⁶

HAMLET: Do you see yonder cloud that's almost in shape of a camel?

POLONIUS: By th' mass, and 'tis like a camel, indeed.

HAMLET: Methinks it is like a weasel.

POLONIUS: It is back'd like a weasel.

HAMLET: Or like a whale?

POLONIUS: Very like a whale.

If Shakespeare had lived today, he could just as well have had his characters speculating on the cloud's resemblance to aircraft, buses and washing machines.

The same effect may be produced by erosion on rocks where people frequently see shapes that resemble other things. For example, on the island of Catalina off the coast of California there is a rock called "Indian Rock" because, with sufficient imagination, it looks like a Native American's head (see figure 2). However, no one mistakes shapes like this as intentional carvings made by intelligent people. On the other hand, monumental carvings of stylized human heads on Easter Island are clearly a product of intelligent design.

Differentiating between outcomes of chance and natural laws and products of ID ultimately hinges on questions of how complex and how specified the objects are. A human face is a complex shape, but different faces vary significantly in morphology, and the general pattern we recognize as a human face has relatively loose specifications (figure 2). Because of this, we recognize faces in everything from smiley faces to a few strokes of a cartoonist's pen, eroded rocks and an apparently random sequence of typed symbols :-). Loose specifications greatly increase the probability of pattern matching. However, it would be remarkable to confuse eroded rocks for the Venus de Milo or the Venus de Milo for an eroded rock.⁷ When two objects or events mesh to very tight tolerances, as in the example of an engine cylinder and piston, such specificity strongly suggests intention and design.

Irreducible Complexity and Specification

In his groundbreaking book *Darwin's Black Box*, Michael Behe laid out a special case of specified complexity called irreducible complexity (IC).⁸ Behe defined irreducible complexity as

A single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning.⁹

IC systems are common in complex machines like aircraft, cars and computers. Take the pistons away from a regular internal combustion engine and, while something that could serve as a large paperweight may remain, it will not perform the function of an engine. The same is true if the cylinders, crankshaft or several other parts were removed. The right combination of purposely created parts makes the whole a complex, functioning unit. Of course, it is not necessary for every part to be vital to the function for a system to be irreducibly complex. In an engine, it may be possible to remove the valve cover and still have an engine that functions, at least for a little while.

The cells that make up living things abound with irreducibly complex molecular machines and systems. An example that appears to be universal to life is the protein molecular machine called ATP synthase. This machine harnesses energy inside cells (figure 3) and can be thought of as a turbine-coupled generator. The turbine is called the F_0 subunit while the ATP chemical energy of the cell is generated in the F_1 head. These two parts are coupled via a γ (gamma) protein driveshaft. Without the driveshaft, the entire complex mechanism is essentially a useless device that does nothing at best and that at worst may cause problems. It is also worth noting that the ATP synthase machine does not operate in isolation. It is only one component in a far larger system.

The complexity of molecular machines like ATP synthase is self-evident. Specification is required in the same way that it plays a role in the production of any complex machine comprised of several integrated parts. In an engine, if a piston is needed, a spare tire will obviously not fulfill the required role. In addition, not just any piston will do. One that is too large in diameter will not fit within the cylinder while one that is too small will allow combustion gases to escape between it and the cylinder wall, thus failing to convert the heat energy generated to useful work. Proteins that make up complex molecular machines like ATP synthase must fit within specifications that make the tolerances necessary in macroscopic machines appear trivial.

Another example of specified complexity is found in the order of nucleotide^{*} letters in DNA. Symbols must occur in very specific order to be able to encode information. For example, the same Roman letters used to spell out the word “god” in English may be arranged in the following sequences: god, gdo, odg, ogd, dgo, and dog. Only two arrangements of the letters g, o and d have meaning in English, and those two, god and dog, have completely different and unrelated meanings. The ordering of nucleotide letters in DNA works in essentially the same way. If DNA is to have meaning, random arrangements of nucleotides will not work. The nucleotides must be arranged in very specific sequences to code for functional proteins, like those from which ATP synthase is composed.

Without laboring the point, encoded information like that found in DNA is clearly an example of specified complexity. The question is whether such specified complexity is reasonably an outcome of chance and/or natural laws, or the product of an intelligent cause. Generally, information is encoded in some physical medium that obeys natural laws in the same way other physical materials do. For example, there is nothing magical about paper and ink in a book, or reflective spots and polycarbonate that make up a DVD. Like all other media, these media perform according to regular physical laws. The same is true of DNA: it is a physical medium that carries information encoded in a remarkably efficient way, but the chemistry is not the information. Like all information, it is independent of the medium that encodes it.

Chance and natural laws may reasonably play a role when it comes to the media in which information is encoded, but they are not reasonably seen as sources of the information itself. It is writers of varying intelligence who encode information in books and newspapers, not the law of gravity or rolling dice. Because this is what is consistently observed, information is most reasonably explained in terms of an intelligent cause.

^{*} Nucleotides are the basic building blocks of nucleic acids, such as DNA/RNA; molecules that, when joined together, make up the structure of DNA/RNA.

Opposition to “Intelligent Design”

On the surface, ID appears to be straightforward and logical – almost a statement of the obvious. However, it does not lack an enthusiastic opposition that presents confident-sounding refutations of its arguments. For example, it has been pointed out that biological IC molecular machines appear to meet Charles Darwin’s acknowledgment that:

If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.¹⁰

Kenneth Miller has commented on this proposition by saying that, while IC may preclude direct evolution of molecular machines and systems that exhibit design and complexity, it does not preclude indirect routes. Miller and others invoke co-option of proteins from other molecular machines.¹¹ Possibly the best potential example of this process is the bacterial type III secretory system (TTSS). This is the molecular machine that injects proteins from certain bacteria into other cells. An example is found in *Yersinia pestis*, the cause of bubonic plague. The TTSS has several proteins and an overall resemblance to the base of a bacterial flagellum, the motorlike structure with a long propeller resembling a whip that bacteria use to propel themselves around. Opponents of ID claim that the TTSS provides an indirect route via which the flagellum evolved in small steps from a structure that fulfills a very different task.

Interest in bacterial flagella stems from Behe’s use of them as an example of IC and, on the surface, such counterarguments sound reasonable. Upon closer examination, however, they are less than compelling. The number of proteins in bacterial flagella is far greater than those in the TTSS. Scott Minich, an expert on the TTSS, has pointed out multiple problems with this argument including the fact that, from an evolutionary perspective, the TTSS appears to have evolved¹² from the significantly more complex flagellum as opposed to the flagellum from the TTSS.¹³ The argument is not particularly different from saying that because modern dentist’s drills use an air turbine and jet engines are turbines, jets must have evolved from dental drills.

Infinity, Miracles and Natural Selection

Another counterargument to ID has been championed by Richard Dawkins. On the one hand, Dawkins claims that “Biology is the study of complicated things that give the appearance of having been designed for a purpose,” but on the other hand that “Natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind.”¹⁴ Dawkins skillfully executes a number of logical sleights of hand to support his thesis that the design apparent in living things is only apparently the product of an intelligent cause, but actually the result of natural selection. He claims that neo-Darwinism combines chance DNA mutations with natural selection to achieve its ends and gives multiple examples of how this might work, none of which actually appears to be Darwinian in nature.¹⁵

Without a specific goal or purpose, natural selection can only work on already functional things that must rely on either chance or intelligent design to produce them in the first place. Ironically, Dawkins is famous for using a portion of the quotation from *Hamlet* cited earlier to illustrate how

natural selection can create information rapidly. In his book *The Blind Watchmaker*, Dawkins refers to a computer program that rapidly creates the phrase “Methinks it is like a weasel,” starting with an initially random sequence of letters.¹⁶ The problem is that the program evidently already had the target phrase programmed into it, and thus knew when it randomly hit on a correct letter as it inexorably honed in on its target. Unfortunately, the actual program cannot be checked, as Dawkins has never been able to produce it for examination by others.

Still, the problem in Dawkins’s illustration of evolution is widely recognized by all but the most dedicated believers. In fact, Dawkins himself pointed out the problem:

[I]n each generation of selective “breeding” the mutant “progeny” phrases were judged according to the criterion of resemblance to a *distant ideal* target,¹⁷ the phrase METHINKS IT IS LIKE A WEASEL. Life isn’t like that. Evolution has no long-term goal.

Others have noted the same issue. Specifically commenting on Dawkins’s approach, David Abel of the Gene Emergence Project and Origin of Life Science Foundation wrote:

Such experiments begin with a highly touted initial random phase space of stochastic ensembles of oligoribonucleotides,* for example. But the succession of repeated runs uses only carefully selected candidates from each previous iteration. The procedure is anything but random. And it is not just constrained by physicydynamics.† It is controlled by the formal choice contingency of the experimenter who pursues his or her own formal “target phrase.” Such a process has absolutely nothing to do with evolution. “Directed evolution” is a self-contradictory nonsense term that has no place in science.¹⁸

It is essential that when unguided evolution is presented as a plausible explanation of the design apparent in nature, it really is unguided evolution and not something different, like the targeted algorithm that seems to have been used in Dawkins’s “Methinks it is like a weasel” example.

When not repeating the same kind of reasoning, as in *Climbing Mount Improbable*,¹⁹ Dawkins uses smoke and mirrors to make it appear that chance is capable of getting things started:

Given infinite time, or infinite opportunities, anything is possible. The large numbers proverbially furnished by astronomy, and the large time spans characteristic of geology, combine to turn topsy-turvy our everyday estimates of what is expected and what is miraculous.²⁰

Weaknesses in the Arguments From Infinity

There are four major problems with Dawkins’s confident but nebulous assertion based on “infinite time” and “infinite opportunities.” The first is that the premise about infinite time is not true. For something to happen, even in infinite time, it must have a finite probability of occurring – in short, it must be possible. For example, given a six-sided die and an infinite number of throws, throwing a million sixes in a row is inevitable – in fact this would be expected an infinite number of

* A group of ribonucleotides, which are nucleotides found in mRNA in which the sugar is ribose.

† The processes of physical/chemical interaction.

times given infinite attempts. But even with an infinite number of throws, a seven will never come up.

A second problem is Dawkins's conflation of a long period of time with an infinite number of opportunities. These are not the same thing at all and the time spans invoked by neo-Darwinists do not provide the probabilistic resources required to explain the origin and evolution of life. Not only is the age of the universe trivial compared to infinite time, but infinite time does not equate with infinite opportunities. Imagine a motionless cube of pure hydrogen at zero degrees Kelvin. In an infinite amount of time, with no energy input, nothing will happen. It certainly will not turn into a kangaroo, or even a simple bacterium.

As noted, in reality even Darwinists do not invoke infinite time or an infinite universe. The closest would be those who resort to theories about hypothetical multiverses* to expand the probabilistic resources available to explain what is here, but even then it is multiple universes, not infinite universes that are invoked.²¹ The difference between infinite possibilities and just a lot of possibilities is a third major objection to Dawkins's contention. Even if his premise about what is possible given infinite time or opportunities was true, the reality is that the only major group claiming infinite resources are creationists who believe God is infinite. The creation itself gives every appearance of being finite in every measurable way including time, space and mass.

A final major objection to Dawkins's contention is that it makes science irrelevant. True science is concerned with observing regularities in nature. We call these regularities "natural laws." Resorting to unobservable multiverses, infinite (or even lots of) time that our inability to time travel prevents us from checking on, or spontaneous generation of life that is not observed today (or recorded in history) is speculation, not science. If we had infinite time and anything was possible in infinite time or opportunities, then the predictive power of science would become irrelevant. Why object to a Creator God? Why doesn't this paper turn into a hundred dollar bill? If anything is possible, science becomes irrelevant and explains nothing – one may as well be unsurprised to see pigs fly.

The criterion of specified complexity as an indicator of ID and the examples of specified complexity that have been shown in living things have proven remarkably robust to the objections of those who oppose ID. That nature – particularly living things – abounds with specified complexity, and that this differentiates organisms from the outcomes of chance and laws, is not restricted only to advocates of ID. In fact the very term "specified complexity" can be traced back to the eminent Darwinist and origin of life researcher Leslie Orgel who wrote:

Living organisms are distinguished by their specified complexity. Crystals fail to qualify as living because they lack complexity; mixtures of random polymers fail to qualify because they lack specificity.²²

In short, empirical evidence from nature is reasonably interpreted to indicate that intelligent design was involved in the production of life. But this interpretation is difficult to accommodate within a materialistic belief system, although some do appeal to aliens and outer space instead of a Creator God to account for the appearance of life on Earth.²³ The arguments presented in books like Behe's *Darwin's Black Box* remain logically consistent with data from nature. No logically coherent natural cause for life has been proposed that accounts for cellular IC molecular machines and DNA coded information without appealing to speculative theories lacking empirical foundation.

* Many universes.

Beyond Molecular Data

Because molecular biology deals with life at its most fundamental level, one where we believe we have some understanding of the chemistry involved, it has proven to be a field on which those arguing for design like to challenge the opposition. This makes sense, since we know the basic behavior of atoms and everyone agrees that they lack observed inherent properties that enable them to organize themselves into living things. Design then becomes a difficult proposition to argue against. But design is evident at many other levels in nature. Indeed, irreducible complexity illustrates the interdependence essential to life from the molecular level all the way up through the biosphere. This interdependence is particularly evident in ecology where animals depend on plants for food and plants depend on animals for a multitude of things ranging from pollination to soil aeration and seed distribution.²⁴

Even the bacteria that make up the majority of cells on earth operate in an elegant and interrelated fashion with the rest of creation. A good example is the nitrogen cycle on which all of life depends for the nitrogen found in proteins, nucleic acids and other molecules. Different microorganisms perform different functions in the cycle in different environments and yet all forms of life ultimately have access to nitrogen in a form that can be utilized in building the protein and other components of their bodies. If this system was all contained inside a single cell, it might readily be considered IC, but spread across the globe in different life-forms it is not usually considered in the same way.²⁵ Whatever one wants to call phenomena like this, such interdependence makes gradualistic explanations of what is observed in nature subject to complex hypothetical scenarios, while understanding that integrated systems of interacting parts are the outcome of intelligent design correlates with observation.

Being liberated to see design in nature does not restrict us to see nature only as a vast machine, or even many small machines. If nature was designed by an intelligent Being as opposed to being the result of unguided chance and natural laws, then the nature of that Designer will be reflected in the design. Design is more than just engineering – it is a creative act, a work of art. Christians recognize nature as a beautiful work of art, once perfect, but now marred by sin. However, the Designer is not distant from his work but remains intimately involved with the creation. The early Christian philosopher Athenagoras of Athens put it this way:

If, therefore, the world is an instrument in tune, and moving in well-measured time, I adore the Being who gave its harmony, and strikes its notes, and sings the accordant strain, and not the instrument ... we do not approach and do homage to the powers, but their Maker and Lord.²⁶

Design in the natural world not only points to the existence of a Designer, but also hints at his nature and the possibility of a relationship between the Creator and his creatures.

Evil Design

All views that allow for design in nature may not necessarily appreciate its beauty in the way Christians are encouraged to. Because of the evil that appears to be engineered into nature, some might see the idea of design in nature as repulsive or terrifying. All life operates by grinding beautiful organisms through the inevitable processes of aging and death. Designs like the vipers' system of

envenomation or the bombardier beetle's toxic rocket system appear to have the sole purpose of causing misery and death, and yet they appear just as designed as the elegant systems by which plants entice insects and place their pollen on them for transfer between flowers. The problem is that arguing against design on the basis of evil in nature is not logical. Just because flint arrowheads, Kalashnikov assault rifles and hydrogen bombs are all designed to maim and kill does not mean they were not designed. It is the purpose of the design we find repulsive. Concern arises, not with design, but with the possible intentions of the designer.

Christian theology recognizes the problems of evil, and proposes an answer. The goodness and love of God, demonstrated in the life of the Creator himself, Jesus Christ, counteracts the misery, suffering and death that are the consequences of evil, freely chosen by humans. Paul contends that the whole creation "groans and labors with birth pangs," looking to the future and the deliverance to come (Rom 8:19-22). That which was originally beautiful and free from evil will be restored (2 Pet 3:10-13; Rev 21; 22). Christ came to save his fallen creation.

If, then, the case is so clear for ID, why is there such opposition to it? Reading the minds of ID opponents is impossible (at least for me), but one possible reason has to do with what ID does to Darwinism and its associated "religious" beliefs. Darwinism is the materialistic belief that only chance and natural laws account for all of reality; it specifically excludes the possibility of any supernatural involvement or intervention in life and human existence. The "sin" ID commits is twofold: First, it allows the possibility of outside intervention in nature, a door that Darwinism closes for philosophical reasons while providing a scientific-sounding justification. Second, ID opens the door to refutations of the adequacy of the neo-Darwinian mechanism of random DNA mutation coupled with natural selection as an explanation for life as we see it.

Dawkins has written: "Darwin made it possible to be an intellectually fulfilled atheist."²⁷ Because ID depends alone on empirical knowledge and logic, it uses the tools of science while peeling away the scientific cover enjoyed by the underlying and opposing philosophy. In other words, ID renders atheism intellectually unfulfilling. Nature acting alone to produce life in all its shimmering diversity is an explanation compelled by materialistic philosophy, not necessarily by an open-minded study of nature.

On the other hand, appreciating design in nature does not automatically lead to the God of Abraham, Isaac and Jacob or to a literal six-day Creation within the last few thousand years. This is neither surprising nor disturbing, although it has caused some Bible-believing Christians to claim that ID does not go far enough. This view arises from an unfair expectation of what nature, studied using the tools of science, can tell us about the God who gave us both nature and revelation. Noting again Romans 1:20, Paul affirms:

For since the creation of the world God's invisible qualities – his eternal power and divine nature – have been clearly seen, being understood from what has been made, so that men are without excuse.

Clearly nature, studied objectively, can get us to square one, by helping us to realize that there is a Creator. This is what ID does. The formerly atheistic philosopher Antony Flew, who changed his mind on the basis of ID, put it this way:

The discovery of phenomena like the laws of nature . . . has led scientists and philosophers, and others, to accept the existence of an infinitely intelligent Mind.

Some claim to have made contact with this Mind. I have not – yet. But who knows what could happen next? Someday I might hear a Voice that says, “Can you hear me now?”²⁸

It is highly unlikely that the creation alone can tell us the whole story of human sin and divine redemption. Indeed, from the beginning Christian theology has insisted that it cannot do so without the assistance and additional information provided by special revelation. The creation may paint clearly the broad brushstrokes of God’s existence and creative power, pointing humanity towards him, but the quest to know him requires faith and understanding of Scripture. We do not have all the data and our fallen minds are imperfect. We will make logical mistakes with what data we do have and the apostle Paul may have been talking about this when he wrote that we now “see through a glass, darkly.”²⁹ Neither nature nor science can replace the gospel message. To suggest that they can, should or might is misguided.

A Christian Response

If ID is sufficiently credible from a scientific perspective, but does not scientifically prove Scripture true, tell the gospel story or identify the Designer as the Judeo-Christian God, what is an appropriate Christian response? One productive response is illustrated by the biblical story of Moses and the burning bush as recorded in Exodus 3. As the story unfolds, Moses asks God for his name (v. 13):

Then Moses said to God, “Indeed, when I come to the children of Israel and say to them, ‘The God of your fathers has sent me to you,’ and they say to me, ‘What is his name?’ what shall I say to them?”

God’s response, recorded in verse 14, is essentially what ID tells us:

And God said to Moses, “I AM WHO I AM.” And he said, “Thus you shall say to the children of Israel, ‘I AM has sent me to you.’”

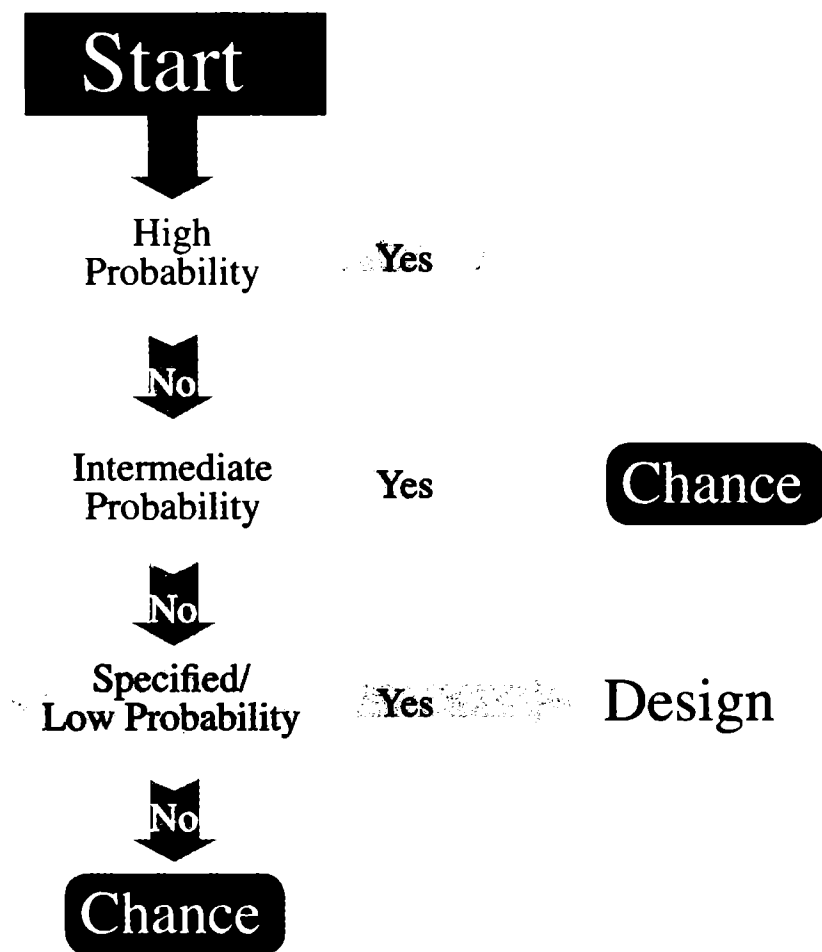
To his people enslaved in Egypt God said, “Don’t worry for the moment about who or what exactly I am – the important thing is that ‘I AM.’” It was only when Moses acted upon the truth that God exists, that God revealed himself as the leader and deliverer of his people, as recorded in the following chapters of Exodus. When Israel acted on the knowledge of his existence, God revealed more about himself through parting the Red Sea and other miracles, particularly at Mount Sinai. Moses and the people of God had to first understand and believe that God – the God of Abraham, Isaac and Jacob – existed before either he or they could act. Once they acted, by leaving Egypt, God acted and provided a more detailed revelation of himself.

People in the modern world, including God’s people, need first to understand that the Creator God exists – that HE IS – before they can take the next step, understanding who he is as revealed in Scripture. ID is a plough, preparing old, hard intellectual ground for planting. But Christians are called to do more than simply “plough the fields,” that is, argue the case for ID. They are called to “plough the fields and scatter.” If Christians leave the field having only ploughed and not sown, weeds will grow up and the field will be useless. To ensure that there will be a harvest and that it will be great, it is the Christian’s task to enthusiastically sow the seeds and check the weeds.

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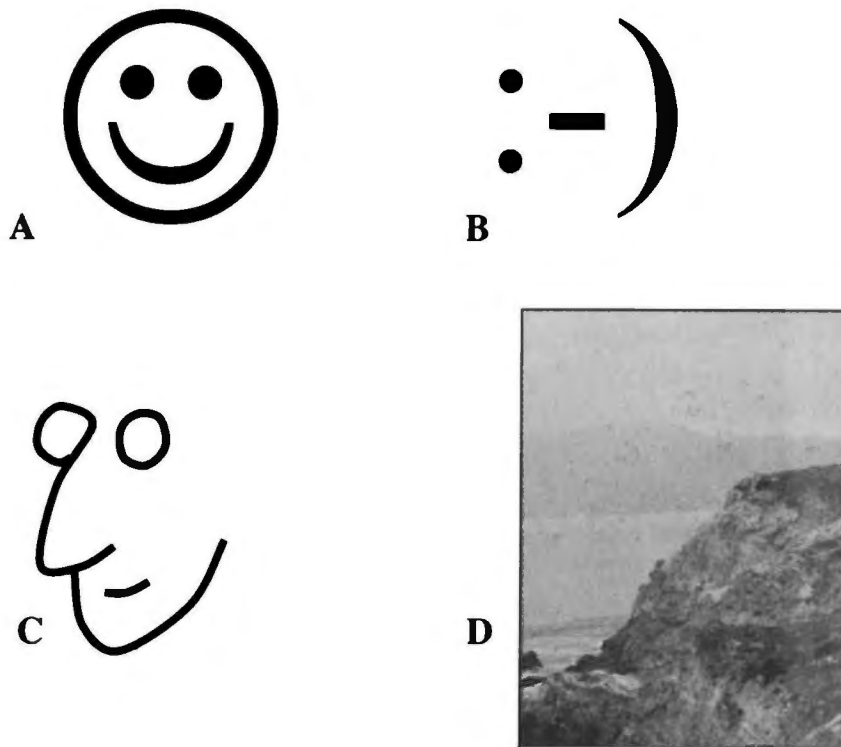
We have argued that ID is enough to start the process of opening minds to the Creator and Savior of the world, but Christians must dutifully shoulder their part of the load if the evidence for ID is to result in souls won to God's kingdom. Christians may choose to sit on their hands complaining that ID does not go far enough, thus ensuring that it does not. Alternatively, they may play their part in the divine plan by providing a logical and coherent biblical and Christ-centered follow-up to the revelation in nature, that God IS.

Figure 1
William Dembski's Explanatory Filter



Dembski's filter provides an algorithm for determining whether design can be inferred from an object or event. The three nodes proceeding from top to bottom represent questions to be addressed with yes or no answers. Events or objects that are highly probable, like stones falling to the ground when dropped or salt forming crystals, can be attributed to physical laws. Events equivalent to flipping a coin and getting heads five or ten times in a row are improbable, but not so improbable that chance can be ruled out as the cause. Highly improbable events or objects that also represent specified outcomes, for example, William Tell hitting the apple as opposed to his son, suggest design. Low probability alone is not sufficient to infer design; specification is also necessary.³⁰

Figure 2
Example Shapes Recognized as Human Faces



Four images recognized by the human mind as faces: (A) smiley face, (B) typed smiley face on its side, (C) cartoon face and (D) Indian Rock on Catalina Island, California. Because humans have relatively loose specifications for what constitutes a face, we recognize “faces” where only a very few criteria like eyes and a mouth are represented.

The diagram illustrates the structure of ATP synthase, a complex enzyme embedded in a cell membrane. It is divided into two main regions: F_0 (embedded in the membrane) and F_1 (protruding into the aqueous phase). The F_0 region includes the stator (a, b₂, δ) and the drive shaft (γ, ε). The F_1 region includes the generator (α, β) and the drive shaft (γ). The c subunits are shown as a ring in the membrane. The labels indicate the following components: F_0 , F_1 , "Generator", "Drive Shaft", Stator, Cell Membrane, a, b₂, δ, α, β, γ, ε, c.

The *E. coli* ATP synthase molecular machine is composed of two major subunits, F_o , which acts as a turbine, and F_1 , which is the generator that combines ADP with inorganic phosphate to make ATP, which is the energy currency of the cell. The two components are coupled by the γ (gamma) protein, which acts as a drive shaft, transferring torque from F_o to F_1 . This is an example of an irreducibly complex molecular machine because removal of any one of several major parts, like the γ protein, renders it incapable of its function of manufacturing ATP. Note that the ATP synthase found in eukaryotic mitochondria are the same in principle, but have several slightly different proteins among other minor differences.

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Chapter 12

THE HEAVENS ARE TELLING: A BIBLICALLY INFORMED COSMOLOGY

Grenville J. R. Kent¹

“The human race is just a chemical scum on a moderate-sized planet, orbiting around a very average star in the outer suburb of one among a hundred billion galaxies. We are so insignificant that I can’t believe the whole universe exists for our benefit.”

–Professor Stephen Hawking²

“When I consider the heavens, the work of your fingers . . . what is man, that you are mindful of him?”

–David (Psa 8:3-4)

One starry night I was singing to my wife, Carla, a romantic old love song:

Fly me to the moon. Let me play among the stars.

Let me see what spring is like on Jupiter and Mars.

Then I actually thought about the words. “Is he trying to kill her?” I said. “The moon has minimal gravity and no atmosphere. A star is a sustained thermonuclear explosion that emits unthinkable heat and more deadly radiation per second than a trillion Hiroshimas. Jupiter is made of gas and its gravity is 2.3 times that of Earth. So she would weigh 2.3 times as much – how depressing. And she would freeze, because its temperature is about minus 150 degrees Celsius. Mars is freezing too.” Carla laughed and kissed me goodnight – but the unromantic truth is that space is not friendly to human life. There is no spring on Jupiter and Mars.

So why is Earth “just right” for human life? For a planet to support life (and astrobiologists are currently searching the cosmos for bio-friendly planets), there are many factors that have to exist within very precise parameters.³ These include the following:

Distance From Star. The planet needs to be the right distance from the parent star. Venus is too close to our sun, and has a huge greenhouse effect at 460 degrees Celsius. Unmanned missions there last only a few hours. So Venus couldn’t support life. Mars is too far away and freezing cold. We live on Earth, which is between them, in the “habitable zone” of our solar system with abundant liquid water, which is essential to life as we know it. This is also known as the Goldilocks zone, because it is “just right,” like Mother Bear’s porridge. A 2 percent change in our orbit either nearer to the sun or further away, would probably wipe out all life on Earth.⁴

The Right Kind of Star. The planet also needs the right kind of parent star: red giants and white dwarfs are highly unlikely to support life. Red dwarfs have only a small habitable zone, but main sequence stars, like our sun, are ideal. Yet if the sun had 20 percent more or less mass, Earth would

be hotter than Venus or colder than Mars and hostile to life.⁵

Orbit Shape. Some planets orbit distant stars with elliptical orbits so long that their oceans, if they had any, would boil when in proximity to the sun and freeze at the outer extremes. Earth's orbit is almost a perfect circle, known to be ideal for the existence and continuity of life.

Spin Rate. Mercury is the closest planet to the sun and its sunny side can reach 465 degrees Celsius. Yet Mercury spins very slowly – its day equals fifty-nine earth-days – and so its dark side is minus 185 degrees Celsius. Fortunately Earth rotates about every twenty-four hours, keeping temperatures fairly consistent and giving most of us dark nights for sleeping.

Rotation Angle. Earth's spin axis is tilted at an angle of 23.5 degrees, which gives us the seasons of the year: when the Northern Hemisphere is leaning away from the sun, it's winter there. A higher angle would mean severe seasons, but fortunately the mass of our moon is large enough to keep Earth's tilt stabilized. The moon's gravitational pull also attracts our oceans and causes tides that stir and cleanse, but is not big enough to pull us out of orbit.

Magnetic Field. We need protection from all the dangerous radiation in space, like the solar wind, which is a stream of electrically charged particles. Fortunately Earth has a magnetic field, thanks to a concentration of molten iron at its core and its moderate rotation rate. But if Earth's magnetic field were much stronger, we would probably experience very severe electromagnetic storms.⁶ Again, just right.

There is life on Earth because the combination of all the necessary conditions makes it possible. Gonzalez and Richards rightly call our earth "the privileged planet," since it exists and supports life thanks to a unique set of circumstances. As yet we know of none like it in the entire cosmos.

Astronomical...

Then there is gravity itself, which operates across astronomical distances. It will help if we can try to visualize the vastness of the universe.

Our solar system is about nine thousand million kilometers across, measured from Neptune's orbit. (We could nearly triple that figure if we counted dwarf planets like Pluto or Eris, or make it ten million, million kilometers if we included comets in the Oort cloud, but we'll stay with the conservative figures.) To grasp that, imagine the fastest space vehicle developed so far, the unmanned Helios solar probe, which travels at 253,000 kilometers per hour, about 260 times faster than a passenger jet. At this staggering speed, it would still take over four years to cross our solar system.

Measured in this way, our solar system is only about 0.0009 light-years in diameter, while the Milky Way galaxy is one hundred thousand light-years across. The Milky Way contains two hundred or perhaps as many as four hundred billion stars like our sun. Yet our sun, which is only an average-sized star, could contain about a million planets the size of Earth. A star in Orion named Betelgeuse could fit in over a million suns the size of ours.⁷ And there are even bigger stars than that.

It used to be thought that our galaxy was about all there was, but estimates from the Hubble space telescope now suggest one hundred billion galaxies, each with one hundred to two hundred billion stars, many of them probably with planets revolving around them. The nearest galaxy to our own Milky Way is called Andromeda, some 2.54 billion light-years away. This distance sounds awesome. But the observable universe is now calculated at twenty-eight billion light-years across. And that's only what astronomers can observe at the present time.

The Milky Way is both rotating and moving relative to surrounding galaxies – think of a merry-go-round on a truck – so our sun with its planets is moving around the Milky Way at 250 kilometers per second, while also moving through space at 630 kilometers per second. Yet even on this scale it appears that things have been finely tuned to allow for human life. Earth seems to have the best location not just in our solar system but also in our galaxy. It is not too near the center of the galaxy,⁸ where X-rays and gamma radiation from the black hole could incinerate us, and where thick traffic would make fatal collisions and gravity disturbances more likely, not to mention danger from exploding supernova. Earth is located on the inner edge of one of the galaxy's spiral arms, which may protect us from radiation. It is also sufficiently removed from the cosmic dust and debris contained within the arms themselves. From this vantage point we are able to observe the rest of the cosmos, or much of it, a fact in itself of great significance.

Gravity

Galaxies can merge into clusters and superclusters, attracted by gravity working across those enormous distances. But gravity also works on a small scale, holding us firmly on to our planet. Gravity is one of the four most basic forces of nature, along with the electromagnetic force and the strong and weak nuclear forces. And the gravitational constant G , or Big G , which helps calculate the attraction between objects with mass as described by Newton's laws of universal gravitation and Einstein's theory of relativity, is again just right. If its strength were smaller, everything would just fly apart. If it were bigger, atoms would jam together, the orbits of stars would contract, stars would squeeze in on themselves and burn faster and our sun would be one thousand times brighter.⁹ In short, we would not exist if Big G had a different value.

Beyond this, the relationship between gravity and the three other forces is delicately fine-tuned.¹⁰ To take just one example, if the ratio of the nuclear strong force to the electromagnetic force were different by only one in one hundred thousand million, million (10^{17}), no stars would form. So gravity is stunningly fine-tuned in itself, along with other forces that have just the right settings and values to allow life to exist on Earth.

There are about thirty "coincidences" or examples of apparent fine-tuning now known, according to Paul Davies in *The Goldilocks Enigma: Why Is the Universe Just Right for Life?* He counts twenty from physics and ten from cosmology.¹¹

Why This Fine-Tuning?

Space is mainly a dead zone with no air, fatal radiation and gigantic players that could crush Earth and extinguish all life on it within seconds. And yet there is a tiny corner of the universe that allows us to live, to think, to look out at the cosmos before us and to wonder. Why should this huge galactic theater have a role for human beings? Why should its settings allow us to live and give us the privileged role of observers? This is often called the cosmic anthropic principle. Those who have thought about it¹² offer several various explanations:

Don't Ask. This question has often been treated with casual concern or considered off limits. The atheist philosopher Bertrand Russell famously once observed, "I should say that the universe is just there, and that's all."¹³ Physicist Edward Tryon feels "our Universe is simply one of those things

which happen from time to time.”¹⁴ Others say that obviously we’re in a universe that supports life, or else we wouldn’t be having this discussion – so there’s nothing really surprising in it.

But philosopher John Leslie¹⁵ asks us to imagine that after a huge firing squad shoots right at us, we find we have survived. Would we then say, “Of course I survived or I wouldn’t be here, so there’s nothing surprising about that”? Or would our first question be, “How did that happen?”

Chance. Many scientists say we are here by chance. Yet many acknowledge that the chances of intelligent life existing anywhere in the universe are astronomically low, almost impossibly low, since all these settings have to be right *at the same time*.

Astronomer Hugh Ross¹⁶ identified 140 settings that must be just right for life to exist in the universe, and 922 factors necessary for one life-supporting planet to appear anywhere in the universe, and calculated the probability of each of them occurring at the same time. He found that it was lower than 1 in 10^{311} . That number is staggeringly formidable. It equals the number of atoms in the known universe *times* the number of atoms in the known universe, *times* the number of atoms in the known universe, *times* the number of atoms in the known universe, *times* one hundred million billion, billion, billion, billion, billion, billion, billion.¹⁷

And this almost unthinkable number describes the odds of getting just one planet ready for human existence. In a universe without God it would be necessary to take these odds and *multiply* them by the odds of the first living cell forming by chance, then by the chances of step-by-step evolution (an enormous number in itself) producing the first human. Unlikely things do happen, but all this is so far beyond the probability bound that it is, in reality borderline impossible.

Many scientists claim that the universe mysteriously just happens to permit life, and that we humans are an irrelevant accident in a vast meaningless cosmos. This is easy (and fashionable) to say – but would it actually encourage science to keep looking for order and understanding of the laws that govern life, and to assume that the universe is a rational place? Or does the claim border on the surreal?

String Theory. This view suggests that “the beginning of the universe was governed by the laws of science and doesn’t need to be set in motion by some god.”¹⁸ Stephen Hawking believes there is a deep underlying unity to physics, a mathematical theory that can explain all, if only we could determine what it was. It may be string theory or M theory, and some very intelligent people are trying to discover it, Hawking among them. I hope they do, and then my questions will be: Why does this most elegant formula exist? Did it arise randomly, by sheer chance, with no thought behind it, or does an elegant law suggest a brilliant Lawmaker? Why is the human mind capable of understanding it? Why do we have a mind in the first place?

Professor Hawking’s famous comment about “chemical scum” is witty, but I do not believe he is chemical scum. He has an incredible mind and an amazing spirit that have enabled him to achieve so highly despite great physical handicap. In my opinion, he still bears the image of his Creator even in an imperfect world. Nor do I think that you or I are chemical scum either. The evidence suggests a more encouraging conclusion. We are capable of love and empathy, of original thought, of creativity. We have rational powers of analysis and deduction, and an innate appreciation of beauty. And we have the intuition that our lives matter.

Multiple Universes. This theory holds that there are many other parallel universes that we are unable to perceive, each one with different physical constants, but that ours is the one that allows

human life. Some very intelligent people are playing with this idea. Yet if these universes are, by definition, unobservable, then can they be the legitimate subject of scientific inquiry? Or does this belong more in the realm of science fiction? Is this physics or metaphysics?¹⁹ A multiverse seems extremely complicated and fanciful when one Creator is a much simpler and more elegant explanation of the evidence.

Simulation. We may just be characters in a giant cosmic game – perhaps titled Earth 1.0 or, for all we know, Earth 100,000.2 – operated by God or some superadvanced civilization. Some serious thinkers are also playing with this idea.

Designer. Many scientists have concluded that the precision and beauty we see in the universe is best explained by a designing mind. Professor Fred Hoyle was an atheist, but in studying how stars form the carbon on which our life is based, he noticed that the energy levels in the molecule had to be at a very precise setting that statistically was extremely unlikely. He wrote,

Would you not say to yourself, “Some super-calculating intellect must have designed the properties of the carbon atom, otherwise the chance of my finding such an atom through the blind forces of nature would be utterly miniscule?”. . . A common-sense interpretation of the facts suggests that a superintellect has monkeyed with the physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature. The numbers one calculates from the facts seem to me so overwhelming as to put this conclusion almost beyond question.²⁰

Hoyle was so shaken by this discovery that he began to think there was a guiding force in the universe.

There is a long list of great thinkers who have seen design in the elegance and function of the universe and the human-friendliness of our little corner of it, and the fact that we have minds that can make sense of it. Nobel Prize-winner Arno Penzias found that the universe matched what he would expect to find after reading the Bible. Sir Isaac Newton wrote of the solar system, “This most beautiful system of the sun, planets, and comets could only proceed from the counsel and dominion of an intelligent and powerful being.”²¹ Belief in God has not stopped such thinkers from asking questions about how these things have happened. In fact, it has made them expect precise laws and complex processes instead of mindless chaos, and has inspired them to keep asking deep questions.

Yet there is a more basic question: Why is there anything at all? Thinkers since Plato and Aristotle have looked for the “First Cause” of the universe and for a “Sufficient Reason” for the existence of everything. This is sometimes called the “cosmological argument” for the existence of God, and it was developed by the Kalam school of Islamic philosophy as well being held by many Jewish and Christian thinkers. Philosophers William Lane Craig²² and Richard Swinburne make a strong and nuanced case for God’s existence based on this argument in various forms.

It seems increasingly clear that the universe must have been caused by something outside itself. Beyond its complexity and precision, its sheer beauty also suggests an artist, a superintelligence. This God seems much bigger than religions have conceived or the human mind can fully know. Yet such a Being would be the most fascinating, intriguing, awe-inspiring identity in the universe ever to have existed.

And if God is interested in human life, as the evidence suggests, then wouldn’t that mean that

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1. *El*, the generic term for God, used once.
2. *Yahweh*, Israel's special, covenant name for God,²⁶ used six times. To a Hebrew ear, six uses would have sounded incomplete, like an unresolved chord, because seven is the number of God and perfection.
3. *Yahweh*, used a satisfying seventh time as part of a threefold name,²⁷ together with "my rock and my redeemer" – intensely personal titles. The song's last note carries the word "redeemer" (Hebrew *goel*). This meant a relative who came to the aid of someone who had fallen into debt so badly that they were about to be sold into slavery, and who spent his own money to buy back (redeem) that unfortunate person. This practice was known in the Torah,²⁸ but was often used as a picture of God redeeming people from literal slavery or from slavery to sin.²⁹ This is clear imagery of the gospel,³⁰ in which Christ paid our huge moral debt accrued by sin. Paul recognized this: "You know the grace of our Master Jesus the Messiah, who though he was rich made himself poor for our sakes, that through his poverty we might become rich" (2 Cor 8:9).

These three parts of the poem are distinct,³¹ yet they work together as literature and as theology. They are linked by the theme of speaking:³²

1. The heavenly bodies speak silently, and their wordless words go without translation to people of every language.³³
2. Yahweh speaks in the Torah. His character can be discerned in this kind advice.
3. The poet speaks to God, asking that his words and even his silent inner dialogues³⁴ will be pleasing. This would make him like the stars, which, with silence and "speech," bring glory to God.

Running through these three parts there is also a theme of illumination of hidden things:³⁵

1. The sun illuminates everything and nothing is hidden (Hebrew *sathar*) from it (v. 6)
2. The Torah illuminates every aspect of life (vv. 8, 11)
3. The poet responds by asking for grace for hidden (*sathar*) faults (v. 12).

Other connections include the poet's wish to be whole, sound or perfect (*tamam*, v. 13) just as God's *torah* is perfect (*tamiym*, v. 7). Yet there is no spiritual pride or legalism here – the poet admits being attracted³⁶ to sins large and small, and asks to be cleansed. Lead me not into temptation, and deliver me from evil.³⁷

Psalm 19 begins with a wide-angle lens focused on the universe. It then zooms in to human life and God's advice for it, and then concludes with a breath-taking close-up of one human heart and its redemption through a private relationship with God.

Links to Genesis

Psalm 19 draws imagery from Genesis, depicting heaven and earth, firmament and sun, day and night, God and human beings.³⁸ David Clines³⁹ argues that it uses Garden of Eden imagery by

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humans are not chemical scum, but loved children, alive with a purpose? The Bible repeatedly emphasizes that human existence is intentional. It says, “The highest heavens belong to Yahweh, but he has given the Earth to the children of Adam” (Psa 115:16). Further, it describes God’s intentions for Earth: “he created it to be inhabited” (Isa 45:18). We are here by divine purpose.

With all this in mind, we now turn to the Bible to explore one of its major cosmological statements, expressed in poetry. C. S. Lewis called it “one of the greatest lyrics in the world.”²³ Here is my translation:

Psalm 19

(To the chief musician: A Psalm by David.)

- | | |
|--|--|
| ¹ The heavens are telling the glory of God
And the sky announces his handiwork, | The commandment of Yahweh is pure
Bringing light to the eyes. |
| ² Day to day pouring out speech,
Night to night revealing knowledge. | ⁹ The fear of Yahweh is clean
Enduring forever. |
| ³ There is no speech. There are no words.
Their voice is not audible, | The judgments of Yahweh are truth
And altogether righteous. |
| ⁴ Yet their message goes throughout the
world,
Their words to earth’s furthest reaches.
In the heavens he has pitched a tent for the
sun, | ¹⁰ They are more desirable than gold dust,
Worth more than a pile of ingots.
They are sweeter than honey,
Dripping from the honeycomb. |
| ⁵ Which is like a bridegroom bursting out of
his room,
And like a champion who loves running
his course. | ¹¹ Even more, they illuminate your servant.
Keeping them is its own reward. |
| ⁶ At one end of the heavens he bursts out
And his circuit reaches the other end.
Nothing can be hidden from the heat. | ¹² Who can know their own unconscious
errors?
Cleanse me from hidden faults. |
| ⁷ The Torah-revelation of Yahweh is
perfect,
Restarting your life.
The testimony of Yahweh is sure
Making a simple person wise. | ¹³ And hold me back from deliberate sins –
I’m your servant,
Don’t let them rule me.
Then I will be sound,
And innocent of the great transgression. |
| ⁸ The teachings of Yahweh are right
Bringing joy to the heart. | ¹⁴ Let the words of my mouth
And the musings of my inmost self
Be pleasing to you, O Yahweh, my Rock,
my Redeemer. |

Three movements. This remarkable poem falls into three parts or movements:²⁴

1. Admiration of the heavens, especially the sun, as showing God’s glory (vv. 1-6)
2. Admiration of the Torah or Written Word of God²⁵ as improving human life (vv. 7-11)
3. Asking for redemption from personal sinfulness (vv. 12-14)

We should notice the names for God in each part and how they are used:

In the Beginning

comparing the *torah* to the tree of knowledge of good and evil. The *torah* revives life more than food can (Psa 19:10). The forbidden fruit seemed desirable (*nechemad*, Gen 3:6) to make a person wise, but *torah* is really desirable (*nechemad*, Psa 19:10⁴⁰), and makes the simple wise (v. 7). The snake promised that the fruit would open Adam and Eve's eyes, but with sad irony their eyes only opened to the fact that they were naked and exposed – yet the *torah* really enlightens the eyes (Gen 3:5-7; Psa 19:8). To eat of the forbidden fruit means certain death, but the *torah* brings life and endures forever (Gen 3:3, 19; Psa 19:7, 9). So Psalm 19 subtly claims that the tasty, eye-opening, life-giving fruit humans really want is *torah* – God's life-giving Word.

Further, the three movements of Psalm 19 parallel the three major movements of Genesis 1-3.

1. In Genesis 1, *Elohim* speaks with mathematical precision, first day, second day, and so on. In Psalm 19, *El* is Creator of the heavens, and by implication, of the earth also.
2. In Genesis 2, *Yahweh* touches the first human face to breathe life into Adam. Genesis 1 and 2 have often been seen as contradictory accounts but, read together as they are placed in Scripture, they depict both the transcendent and immanent aspects of God. This is the same God, but viewed from different camera angles. In the second movement of Psalm 19, *Yahweh's torah* brings life (v. 7), and with it understanding.
3. Then in Genesis 3, humans sin and both humans and nature experience the Fall, with its devastating consequences. Yet God seeks them and promises to solve the problem caused by sin. The curse is still obvious in nature – thorns and thistles, painful birth, and so on – yet God promises redemption. Presumably God could have shorn a lamb and made them woolen garments, but instead God makes them garments of skin, signifying that death and blood were involved, again depicting the Lamb of God, slain from before the creation of the world (John 1:29, 36; Rev 13:8), who would come and give his life-blood for atonement. This may be suggested in the final lines of Psalm 19, which could well borrow the keywords “perfect” and “pleasing” from Leviticus 1:3-4, a text about lamb sacrifice.⁴¹

Finally and significantly, the poet prays that he will be innocent of “the great transgression.” Scholars have understood “the great transgression” to mean many things – idolatry,⁴² sun worship, rebellion, hubris, presumption, adultery, some specific great sin,⁴³ or the great variety of sins a person can commit. But Clines argues for a Genesis connection, proposing that Psalm 19:12-15, especially verse 13,⁴⁴ may be alluding to the Fall narrative, so that it would mean the fall of the human race – *the* great transgression. The poet then prays, “Don't let them [sins] rule me,” using a word from God's command that Cain must rule over sin (Gen 4:7). So the poet personally longs for the innocence of Eden before the Fall when the consequences of the Fall did not curse the earth and its people. In the context of a poem about nature, he may be looking forward to a time when there is no more curse in the whole creation (*cf.* Rev 22:3; Rom 8:18-23).

So Psalm 19 seems to correspond to the movements of the Genesis Creation narrative: *El* creates heaven (and earth); *Yahweh* communicates with humans; *Yahweh* comes close as a personal rock and redeemer.

Natural and Special Revelation

Psalm 19 links the natural world and religion. This seems a bold move today, with some well-publicized scientists saying God is a delusion, and religion is like smallpox but harder to eradicate. Some religious people have acted as if science were threatening to faith, ignoring its logic and the technological blessings it provides and suggesting that scientists “must be crazy” to believe certain things. The media portrays a war between science and religion, when in fact a significant proportion of scientists believe in a personal God.⁴⁵ This psalm shows both nature and Scripture as revealing God, although in different ways: the heavens declare his glory, and the Torah reveals his moral laws, his will and his redemption.

Scholars have long spoken of the “book of nature” that reveals God, as does the Bible (God’s “special revelation”). For example, Sir Francis Bacon (1561-1626), often called the father of the scientific method, wrote about two books, “first, the volume of the Scriptures, which reveal the will of God; then the volume of the Creatures, which express His power.”⁴⁶ For Galileo Galilei (1564-1642), the book of nature was written in the language of mathematics, and astronomy could reveal God to those properly educated. He wrote that

to prohibit the whole science [of astronomy] would be but to censure a hundred passages of holy Scripture which teach us that the glory and greatness of Almighty God are marvelously discerned in all his works and divinely read in the open book of heaven. . . . Within its pages are couched mysteries so profound and concepts so sublime that the vigils, labors, and studies of hundreds upon hundreds of the most acute minds have still not pierced them, even after continual investigations for thousands of years.⁴⁷

Galileo’s statement about Scripture is often quoted: “The intention of the Holy Spirit is to teach us how one goes to heaven, not how the heavens go.” Yet Hess argues that this statement “should be interpreted in light of his conviction of the complementarity of the two books.”⁴⁸ In making way for his new theory, Galileo did not seek to lessen the authority of Scripture, but to interpret Scripture differently.

More recently, of course, many have questioned whether indeed nature reveals languagelike thought or has an author. Yet Bible writers see nature as revealing God. For example, Paul, who quotes Psalm 19,⁴⁹ argues that

since the creation of the world God’s invisible qualities – his eternal power and divinity – have been clearly seen, being understood from what has been made, so that people are without excuse (Rom 1:20).

Paul argues that natural revelation is good enough for any person – Torah-enlightened Jew or ignorant Gentile, educated Greek or barbarian – to see that there is a God, yet Paul also describes people who ignored that truth and worshiped nature itself, with terrible moral and social consequences (Rom 1:21-25). It is important to note that Paul does not claim that nature reveals God’s character and

will, but just his divine power. “Natural and special revelation complement one another, ‘declaring’ different facets of the one Revealer.”⁵⁰ So the revelation in nature needs the special revelation of Scripture, for several reasons.

First, nature gives a silent, “indirect and mysterious witness,” which often requires some logical deduction and inference, while Scripture speaks in (usually) clear words. Psalm 19 spells this out (in words): the wordless stars contrast with “the manifest, verbal message” of Torah.⁵¹

Second, nature does not reveal that God created it, so that some worship the stars rather than their maker. Nature is not brand-named with a cross. The first movement of Psalm 19, describing natural revelation, shows the heavens as God’s handiwork, disagreeing with those who saw them as gods themselves, but does not name this God beyond the generic term *El*, which could be used of any god in the ancient world. When Yahweh is introduced in movement two, it is through *torah*. Put simply, nature can reveal that there is a powerful and divine Being, but in order to know the identity and character of that Being, another revelation is necessary – Scripture. The psalm says that natural revelation is brilliant, but God’s written revelation in Scripture is “perfect” (Psa 19:7).

Third, the reason that nature does not perfectly reveal God is the Fall and the curse described in Genesis (3:14-19). This is important, as an example may show. I have two books called *Unintelligent Design*, which argue that because there are cruel and apparently incongruous things in nature – the AIDS virus, spiders with venom sacs, killer whales – the idea of an intelligent Designer is untenable. Logically, however, that does not follow because even a human system that is currently flawed, for example, a computer with a virus, can still provide evidence of great intelligence. And the Bible’s argument from design is more subtle than that: it claims that nature, although fallen below God’s original perfect creation, will one day be restored. This is the major metanarrative of the Bible – paradise lost and found. Yet nature cannot give us moral or redemptive messages: biology is red in tooth and claw,⁵² and even the stars “do not reveal anything by way of ethical demands.”⁵³ Psalm 19 fits within that perspective, claiming that nature reveals God’s glory but that Scripture reveals God’s moral character and his redemptive purpose.

So *torah* must interpret nature for us, and explain why it is as it is. This is a key insight for the contemporary age. Since Darwin, the pressure has been on Christian theology to accommodate, to revise itself to fit with Darwinism, to allow nature (or, more precisely, one interpretive lens placed upon nature) to reinterpret Scripture, even if Scripture must be twisted and forced into an unnatural pattern. Not to do so seems in our culture to be blind to nature and deaf to scientific orthodoxy – “Dawkins says it, I believe it, and that settles it.” Yet anyone who reads the Bible, and is courageous enough to look for its most natural reading, has another authority – one that is not fallen. There is no question that God speaks in nature; but would it be sensible to allow fallen nature to rewrite the Bible, or is it more logical to let the Bible be the foundation for our understanding of nature?

Creative Challenge

At the time Psalm 19 was written, many people believed in the sun-god and in many other deities in nature. The sun-god Shamash was “often associated with justice and truth and enlightenment,”⁵⁴ so this poem playfully personifies the sun (Hebrew *shemesh*) as a bouncy bridegroom or athlete, but makes it very clear that God has pitched his tent or, dropping the metaphor, determined its place.⁵⁵ The poem transfers “attributes from the sun god to YHWH, the one God,”⁵⁶ making it crystal clear

that it is Yahweh God who enlightens in every sense, using the sun to achieve his purposes, and who executes justice. The poem's style may mimic hymns to various sun-gods,⁵⁷ but its worldview is very different: all nature is controlled by one Creator God.⁵⁸

This Hebrew monotheism was actually a step towards authentic science. If one believes that there are many gods who control various aspects of the natural world and that their interaction with humans depends on whether one prays enough or gives enough, then one wouldn't bother to look for consistent laws in nature. But the Bible saw one God and expected one set of laws to govern all nature. Many of the great scientists also worked from this assumption. They expected nature to be logical and coherent, and expected the human mind to be able to understand it because the same Mind created both. Thus, science for Kepler could be "thinking God's thoughts after Him."

Psalm 19 creatively challenged the dominant worldview of its time – and it does so today. Most scientists today believe in one less god than monotheism. While also offering horoscopes based on recycled ancient superstitions, much of the mainstream media suggests that science has eliminated the need for any God at all, oversimplifying complex issues and presenting only one side of an unbalanced ongoing discussion. Some scientists see creationists as a Flat Earth Society composed of anti-intellectual faith-heads yet, as another chapter in this book reveals, a number of elite scientists – some believers, some not – are pointing to the widening cracks in the dominant paradigm. Some are seriously wondering whether the complex masterpiece of DNA spelling could have arisen by chance, beginning to question the standard models of the origin of life and the mechanisms of biological evolution. Some are not mere reflectors of these mainstream ideas, but reformers who read the plain meaning of Scripture without being simplistic or atavistic, and use it as a catalyst for original thought, which seeks to understand God's revelations in nature and in the Written Word.

You Are Here

After I spoke on Psalm 19 recently, a scientist said to me, "For years I was stuck in the first section – enjoying science and sensing there had to be a mind behind it, but not really knowing who or what that mind was, or anything about its name and character. Then I started checking out church, and gradually moved into section two, admiring the Bible and its moral code. Now I'm started into section three, speaking to God, asking for grace for my personal sins, beginning to know that he is *my* redeemer from sin, *my* rock in whatever life throws at me." I found his intuitive reading of this great psalm made me check my own personal connection with God.

Psalm 19 invites us to imagine a Creator big enough to fling out the universe with anthropomorphic fingertips, and challenges us to reflect on this incredible book of nature, prizing science and logic. It reveals a communicative God wise enough to guide our lives with his timeless Word and elegant laws, calling us to study *torah* with a humility and awe at God's own character and grandeur. And its final word rings with hope of an immeasurably rich relative who is gracious enough to come close and buy us out of slavery – the Lifegiver paying with his own life to make the universe "very good" once more, and to include all of us in it. It also challenges us to tell people of every language about God's greatness – as the stars do – and of his grace to all the fallen children of Adam and Eve.

"They that be wise shall shine as the brightness of the heavens, and they that turn people to righteousness shall shine as the stars for ever" (Dan 12:3).

NOTES AND REFERENCES

1. The author wishes to thank four peer reviewers (three astronomers and one Old Testament specialist), but accepts responsibility for any errors that may remain.
2. From an interview with Ken Campbell on the 1995 TV show *Reality on the Rocks: Beyond Our Ken*.
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4. John C. Lennox, *God's Undertaker: Has Science Buried God?* (Oxford: Lion, 2009), 72.
5. Stephen Hawking and Leonard Mlodinow, *The Grand Design: New Answers to the Ultimate Questions of Life* (London: Bantam Press, 2010), 152-153.
6. See Hugh Ross, *Why the Universe Is the Way It Is* (Grand Rapids, MI: Baker, 2008) and www.reasons.org/fine-tuning (downloaded June 30, 2011), "Fine Tuning," number 38.
7. Dinah L. Moche, *Astronomy: A Self-Teaching Guide* (Hoboken, NJ: John Wiley & Sons, 2009), 87.
8. Ross, "Fine Tuning," numbers 1, 16.
9. Paul Davies, *The Goldilocks Enigma: Why Is the Universe Just Right for Life?* (London: Penguin, 2007), 163.
10. Hawking and Mlodinow, *The Grand Design*, 160.
11. Davies, *Goldilocks*, 166. He says they may not all be independent or require fine-tuning, but some do.
12. E.g., Davies, *Goldilocks*, last chapter.
13. In his 1948 BBC debate with Frederick C. Copleston, S.J., on the existence of God.
14. Quoted in Jim Hold, "Nothing Ventured: A Bold Leap Into the Ontological Void," *Harpers*, November, 1994.
15. John Leslie, *Universes* (London and New York: Routledge, 1989), 13-15.
16. See Ross, *The Universe* and www.reasons.org/fine-tuning.
17. Estimating the number of atoms in the universe at 10^{80} .
18. Hawking and Mlodinow, *The Grand Design*, 135.
19. John Polkinghorne observes, "It's a metaphysical guess. It has mostly been popular and mostly been invented in order to explain away the fine tuning of our particular universe. If our universe is just one winning ticket in some vast multiverse collection, then somehow it seems less remarkable that it has all the properties it has. It's possible that God has chosen to create a number of different universes for a number of different divine purposes. You couldn't rule it out. But neither can you rule it in." Paul Fitzgerald, "An Interview With John Polkinghorne," www.religion-online.org/showarticle.asp?title=3510, downloaded June 28, 2011.
20. Fred Hoyle, "The Universe: Past and Present Reflections," *Annual Reviews of Astronomy and Astrophysics* 20, (1982), 1-35; 16, <http://articles.adsabs.harvard.edu>, accessed August 18, 2011.
21. Isaac Newton, *Newton's Principia: The Mathematical Principles of Natural Philosophy*, trans. A. Motte (New York: Daniel Adee, 1846), 501.
22. William Lane Craig, *Reasonable Faith: Christian Truth and Apologetics* (Wheaton, IL: Crossway Books, 2008), 96-156; Richard Swinburne, "The Cosmological Argument," in *The Existence of God* (Oxford: Clarendon Press, 2004), 133-152.
23. C. S. Lewis, *Reflections on the Psalms* (London: G. Bles, 1958), 56.
24. Peter Craigie, *Psalms 1-50* (Waco: Word, 1983), 179.
25. The Hebrew word "Torah" is often translated "law" but also includes the idea of "doctrine" (*The Jewish Encyclopedia*), kind instruction or teaching (*Theological Word Book of the Old Testament*) and "direction, instruction" (*The Brown Driver Briggs Hebrew and English Lexicon*). It can also refer to the five books of Moses, and in its broadest sense means revelation or even Scripture.
26. "This section is as national-specific as the first was universal." Benjamin J. Segal, *A New Psalm: A New Look at Age-old Wisdom*, <http://psalms.schechter.edu/2010/06/psalm-19-from-heaven-to-torah-to-man.html>, accessed June 22, 2011.
27. Franz Delitzsch, *Biblical Commentary on the Psalms*, vol. 1 (Grand Rapids, MI: Eerdmans, n.d.), 280.
28. See Lev 25:25-54. Boaz plays this role in the book of Ruth. The *goel* also sought justice if a relative was harmed.
29. Cf. Exod 6:6; 15:13; Job 19:25; Psa 19:15; 69:19; 72:14; 74:2; 77:16; 78:35; 103:4; 106:10; 107:2; 119:154; Prov 23:11; Isa 35:9; 41:14; 43:1, 14; 44:6, 22ff.; 47:4; 48:17, 20; 49:7, 26; 51:10; 52:3, 9; 54:5, 8; 59:20; 60:16; 62:12; 63:9, 16; Jer 31:11; 50:34; Lam 3:58; Hos 13:14; Mic 4:10.
30. Delitzsch, 280, calls this a "sharply sketched soteriology."
31. Some scholars have suggested the first section is borrowed from a hymn to the sun, and have not seen connections. Lewis, *Reflections*, 63, observes: "A modern poet could pass with such abruptness from one theme to another and leave you to find out the connecting link for yourself."
32. Arndt Meinhold, "Überlegungen zur Theologie des 19. Psalm," *ZTK* 80 (1983), 119-136. Michael Fishbane, *Text and Texture*, (New York: Schocken, 1979), 86.
33. As the gospel must do, Mark 16:15; Revelation 14:6. This may be Paul's point in Romans 10:18.
34. Perhaps the inner thoughts he is now expressing in music. Terrien argues that "meditations," can mean musical meditations on soft strings, cf. Psa 9:17; 92:4, Samuel Terrien, *The Psalms: Strophic Structure and Theological Commentary* (Grand Rapids, MI: Eerdmans, 2003), 214.
35. Konrad Schaefer, *Berit Olam: Psalms* (Collegeville, TN: Liturgical Press, 2001), 47.
36. Segal, "Psalm 19," n.p.
37. As Artur Weiser, *The Psalms: A Commentary* (London: SCM Press, 1962), 203.
38. Michael Wilcock, *The Message of Psalms 1-72* (Leicester: InterVarsity Press, 2001), 74, sketches these connections.
39. D. J. A. Clines, "The Tree of Knowledge and the Law of Yahweh (Psalm XIX)," *VT* XXIV, 1: 8-14
40. John Goldingay, *Psalms*, vol. 1, Psalms 1-41 (Grand Rapids, MI: Baker, 2006), 293, also observes this connection.
41. Segal, "Psalm 19," n.p.
42. Mitchell Dahood, *The Anchor Bible: Psalms 1, 1-50* (New York: Doubleday, 1966), 124.
43. Craigie, *Psalms 1-50*, 183.

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44. Clines, "Tree of Knowledge," 13.
45. See Lennox, *God's Undertaker*, 17-18.
46. Francis Bacon, *The Advancement of Learning*, VI, 16, cited in Peter M.J. Hess, "Two Books," in *Encyclopaedia of Science and Religion*, <http://www.enotes.com/science-religion-encyclopedia/two-books>, accessed June 22, 2011.
47. Galileo Galilei, *Letter to the Grand Duchess Christina of Tuscany*, 1615. www.fordham.edu/halsall/mod/galileo/tuscany.asp, accessed August 18, 2011.
48. Hess, "Two Books," n.p. Galileo introduces the comment by saying he was quoting "something that was heard from an ecclesiastic of the most eminent degree," probably Cardinal Baronius.
49. In Romans 10:18, and Derek Kidner suggests the thought of Psalm 19 "may underlie the argument of Romans 1:18ff," *Psalms 1-72: An Introduction and Commentary on Books I and II of the Psalms* (London: InterVarsity Press, 1973), 97.
50. Craig C. Broyles, *Psalms* (Peabody, MA: Hendricksons, 1999), 108.
51. Hans Joachim Kraus, *Psalms 1-59* (Minneapolis, MN: Augsburg, 1988), 37-38.
52. *Ibid.*, 37-38: "Thus we should speak with caution and with reservations when referring to a revelation of God in the creation. What the created world says of itself is not necessarily a revelation of Yahweh."
53. Goldingay, *Psalms*, 298.
54. Nahum A. Sarna, *Text and Texture: Close Readings of Selected Biblical Texts* (New York: Schocken, 1979).
55. The poetic reference to the sun's path through the heavens (v. 6) has at times been interpreted as supporting an earth-centered cosmology. Contemporary cosmology, of course, does see the sun as moving through the heavens, but the ancient text is perhaps best understood as using a commonly used expression from a human point of view. This could be compared to our use of the term "sunrise" when we know that the sun does not actually rise when we begin to see it.
56. Robert Alter, *The Book of Psalms: A Translation With Commentary* (New York: W. W. Norton, 2007), 62.
57. Kraus and others posit that the first section was once a Canaanite hymn, later converted (or subverted) to praise Yahweh. That textual history is interesting but cannot be proven either way, and the end result is a literary and theological unity, perhaps somewhat comparable to the different narratives in Genesis 1 and 2.
58. Craigie, *Psalms 1-50*, 181.

Chapter 13

THE NATURAL LIMITS OF NEO-DARWINIAN EVOLUTION

John C. Walton

Charles Darwin's theory of evolution was launched in the second half of the nineteenth century into a climate of opinion very favorable to grandiose universal theories. The ground had been prepared by a succession of remarkable scientific insights that seemed to be building towards a grand, unified, deterministic theory of everything. Isaac Newton's laws of gravity had explained the motions of the planets and stars and had led to the idea of the universe as one colossal, interconnecting machine seamlessly operating in absolute space and time. In the early nineteenth century John Dalton's atomic theory of matter led to a huge advance in understanding about the stuff planets and stars were composed of. When in 1828 Friedrich Wöhler converted the inorganic compound ammonium cyanate to the organic compound urea, a serious blow was dealt to the idea that compounds derived from living sources possessed a special vital force. Instead it appeared that biological organisms, including human beings, were made of atoms and molecules essentially similar to those encountered in the mineral world. At this same time huge strides were being made in understanding electricity and magnetism. James Clerk Maxwell's famous equations, from the 1860s, unified electricity and magnetism and showed that light was another manifestation of the same phenomenon.

The success of science in explaining how the inanimate world functioned led naturally to the expectation that the biological world would soon yield its secrets to scientific advance. When the *Origin of Species* was published in 1859, Darwin's ideas resonated strongly with those anticipating that human reason, coupled with science, would provide powerful and universal laws of biology. Darwin's idea of all living things descending from a simple common ancestor by natural selection among emerging favorable traits seemed to fulfill this dream. Darwin was not able to offer a precise explanation of how new species arose, but by the 1930 and 1940s, Darwin's idea had been married to population genetics.¹ The resultant theory, which became known as the "modern synthesis"² or the "neo-Darwinian synthesis," is still the dominant paradigm in evolutionary biology.³

Even before the final coalescence of the neo-Darwinian synthesis, the climate of opinion in the physical sciences was turning away from Victorian certainties. Almost all the grand naturalist theories began to unravel in the twentieth century. Early on scientists succeeded in splitting Dalton's atoms, revealing deeper layers of electrons and nuclei. Eventually, the inner structure of quarks and gluons was discovered within the nuclei themselves. Study of these fundamental species disclosed that they did not follow classical electromagnetic and mechanical laws but required new quantum mechanical principles. From about 1910 onwards the closed, determinist, Newtonian worldview was giving way to the quantum worldview. Although the philosophical implications of quantum

mechanics are still being debated,⁴ several crucial conclusions are well established. The quantum world is statistical so there are no certainties. Then Heisenberg's uncertainty principle established that mechanical explanations of natural processes are always incomplete and hence the universe can never be described completely. The future is open. These discoveries threw a dose of cold water over mechanical, deterministic explanations of how nature originated and functioned. A watershed in the popularity of the naturalist worldview can be discerned in the 1950s and 1960s. A remarkable picture of a universe created out of nothing, at a definite start date, was beginning to emerge from physics and cosmology. The universe was being revealed as much more strange and mysterious than had been supposed by the Victorian humanists.

The Rise of Molecular Biology

The deciphering of the structure of DNA in 1953⁵ was a key factor in reshaping the scientific landscape. DNA was shown to consist of two long complementary chains of nucleotides,⁶ linked in a specific order, twisted up into a double helix. It was soon realized that genes are actually sections of this DNA containing particular sequences of nucleotides. The exact order in which the nucleotides appear is a code carrying the information cells need to build individual proteins. There is a close analogy to the way letter and word sequences carry information in a book. The implications of this arrangement for genomes, gene expression, replication and gene damage are still being explored. During the next decades the science of molecular biology began its rise to stardom. The fantastically complex structures of many cell components were worked out, along with their operation as tiny molecular machines. The huge challenge that the amazing organization and information content of these biological structures posed for evolutionary theory began to be appreciated.

A superlative achievement of molecular biology was the elucidation of the mechanism of protein synthesis in all its intricate complexity. The discovery of how this amazing molecular level system of information storage, transcription, code translation and protein manufacture worked was a triumph of scientific insight. It was immediately apparent, however, that the complex structures of the approximately one hundred DNA, RNA and protein biomolecules involved, their complementary and matching shapes, the machinelike operation of individual components and the orchestrated coordination of the whole system gave every appearance of design. Explaining how this could have originated in terms of random chemical processes was going to pose an incalculable challenge for evolutionary biologists.

By the second half of the twentieth century, confidence in scientific explanations as paramount descriptions of nature had diminished markedly outside of the biological sciences. The old, determinist, Newtonian worldview had gone completely. Difficulties in marrying the classical domain of physics with the quantum mechanical domain, along with uncertainties about the interpretation and philosophical implications of the latter, had strengthened the view of all scientific theories as partial and incomplete models of nature rather than actual descriptions of reality. On the other hand, the wonderful successes of molecular biology had inspired biologists with great confidence in the power and usefulness of their scientific paradigms. The success of molecular biology and its perceived prestige had carried evolutionary biology along on its coattails.

Defining “Evolution”

There are several different schools of thought about what constitutes good science.⁷ However, well-established scientific theories almost always have certain characteristics: (1) crucial aspects can be tested in well-chosen laboratory experiments; (2) they are unified and systematized by a mathematical framework and (3) they are able to make quantitative estimates, or at least well-defined predictions, about future outcomes. How does evolutionary biology stand up in relation to these criteria?

It is important first to identify what really constitutes “evolution” because the term is obviously rather flexible. Sometimes “evolution” is loosely used for any kind of change in biology. Small-scale changes in a population, over a few generations, also known as “change below the species level” is best called “microevolution.” Of course the species concept is itself somewhat plastic and is notoriously difficult to define, particularly for microorganisms.⁸ The “biological species concept,” which demarcates species as “groups of organisms capable of interbreeding and producing fertile offspring,” is a widely held rule. There is a fine distinction to be drawn between a group of related species that are incapable of interbreeding, even artificially, and a group of organisms that do not interbreed because of geographic isolation, or lack of empathy, but from which live offspring could be obtained artificially. For the latter group, permanent differentiation has not occurred and must be sought at the genus or perhaps even at the family classification level. Speciation is the process by which new biological species arise. Macroevolution refers to large scale innovations bringing into existence new organs, new body plans or other genuinely new biological structures. In macroevolution novel genetic information, not present in the ancestral genome, appears. In its broadest sense “evolution” refers to the origin of new species, genera or families and encompasses the development of the whole biological domain from molecules to man. This grandiose progress from microorganisms to plants to animals is what Darwin had in mind and what is usually meant in the context of origins.

Evidence of Microevolution

Most of the hard evidence produced in favor of “evolution” actually relates to microevolution. Countless textbooks repeat the story of Darwin’s classic observations of the varieties of finches that have developed on different islands of the Galapagos group. The differences between these finches are minor and mainly relate to plumage and the size of their beaks. Then biologists continue to use the color change of peppered moths, attributed by Kettlewell to industrial melanism, as a prime example of evolution, even though it is now known Kettlewell’s experiments were seriously flawed and that the moths do not naturally rest on tree trunks.⁹ However, the color change is another example of microevolution. More recent evidence includes observations of changes in the limb sizes of Caribbean lizards (tree anoles), from field studies and laboratory experiments, in response to changes in tree dimensions.¹⁰ Significantly however, fossil anoles preserved in amber supposedly twenty million years old were “virtually indistinguishable from the tree-canopy habitat.” Dark deer mice living on sand dunes in Nebraska were found to have developed sandy-colored coats, camouflaging themselves from predators, within just a few thousand years.¹¹

Many other examples of comparatively small microevolutionary changes in color, shape or appearance have been documented in the literature. There can be no doubt that small extent

“evolution,” like these examples, occurred in the past and is occurring today. Microevolution is not controversial and is accepted by neo-Darwinians and creationists alike. The latter believe living things were designed with the capacity to adapt, within limits, to changing environmental and ecological circumstances.

The Quest for Evidence of Macroevolution

Neo-Darwinists insist there is no essential difference between microevolution and macroevolution. The main distinction, they assert, is that one occurs within a few generations, whilst the other takes place over geological time and in many cases is just the accumulation of a large number of small changes. Evolution, beyond the species level, results in beginning and ending generations that could not interbreed, but the intermediate generations could. If the beginning and ending generations, even though classified as different species, could still be bred artificially, then the process should still be considered as microevolution. Most, if not all, of the examples of macroevolution cited in evolutionary literature belong to this category.

A common procedure used by evolutionary biologists is simply to arrange a group of organisms in order, according to a progression in some physical characteristic(s). It is then confidently asserted that the sequence demonstrates macroevolution and that different species are related by common descent. This *modus operandi* carries little weight with those looking for convincing evidence of macroevolution. It simply assumes what needs to be proved.

Are there cases of macroevolution from repeatable laboratory experiments, or from carefully supervised field observations, carried out under controlled conditions? Although observations over geological time are not, of course, possible, this is not too much to ask because species that multiply very rapidly and run through hundreds and even thousands of generations are available. Evolution can be speeded up by artificially applying intense selective pressure, by guided rather than natural selection, and by greatly increasing mutation rates through radiation or chemical agents. A huge body of research along these lines has been reported in the literature.

Manipulating the Mutable Fruit Fly. Several famous research programs have involved fruit flies (*Drosophila melanogaster*), which are well suited for studying evolution on a short timescale because they breed rapidly, pass through many generations quickly and have only four chromosomes. Hundreds of mutations have been induced in fruit flies and the outcomes have been observed over hundreds of generations. The number of bristles could be increased from thirty-six to fifty-six or decreased to twenty-five; but then sterility set in. Various changes in eye shape were observed and different wing characteristics were developed. All the observed changes belonged to the microevolutionary category.

Evolutionary textbooks often illustrate their accounts of fruit fly experiments with pictures of a variety having four wings instead of the usual two. The intent is shock and awe at the power of evolution; but several circumstances need to be appreciated. Three separate mutations had to be artificially combined in order to produce the second set of wings from the “halteres” – tiny appendages that help the fly balance. This is extremely unlikely to happen spontaneously in nature and was actually an example of genetic engineering. The second set of wings is nonfunctional because there are no flight muscles. The insect is therefore actually disabled. Males have difficulty mating and the line soon dies out in the wild.

Fruit fly studies have extended over many decades. The clear message from these experiments is that there are limits beyond which changes cannot go. Either the organism becomes non-functional or sterility sets in. Maurice Caullery concluded: "Out of 400 mutations that have been provided by *Drosophila melanogaster*, there is not one that can be called a new species. It does not seem, therefore, that the central problem of evolution can be solved by mutations."¹² Jeremy Rifkin comments, "The most frequent correlated response of one-sided selection is a drop in general fitness. This plagues virtually every breeding experiment."¹³ It is a fair summary of the overall outcome of these experiments.

Smart Bacteria to the Rescue? That bacteria develop resistance to drugs is pretty universally known. Surely macroevolution has been observed among these adaptable single-celled organisms! Microorganisms have indeed been the subject of intense genetic experimentation. They are even more ideal for laboratory study because they run through thousands of generations in real time. Vast numbers of mutations have been induced in many strains of bacteria, particularly *E. coli*. But the outcome in terms of speciation and macroevolution is much the same as with fruit flies. Microevolutionary changes certainly occur, but evidence of permanent speciation is lacking. In his recent book¹⁴ Coyne claimed that experiments carried out by Paul Rainey and a coworker with *Pseudomonas fluorescens* constituted one clear example of speciation. The bacterium was said to evolve through mutation and selection in a non-uniform broth to two new ecologically different species. But this wasn't the whole story. Rainey also found that when the different forms were placed back into the original environment, they "suffered a rapid loss of diversity."¹⁵ In bacteria, ecologically distinct populations only constitute separate species if the distinction is permanent. The rapid reversal of ecological distinctions in Rainey's experiment shows that, contrary to Coyne, new species were not formed in these experiments. Bacteriologist Alan Linton looked for confirmed reports of primary speciation in bacteria and his conclusion is very significant:

None exists in the literature claiming that one species has been shown to evolve into another. Bacteria, the simplest form of independent life, are ideal for this kind of study, with generation times twenty to thirty minutes, and populations achieved after eighteen hours. But throughout 150 years of the science of bacteriology, there is no evidence that one species of bacteria has changed into another.¹⁶

Woolly scenarios and special pleading. Hard evidence for macroevolution from repeatable laboratory experiments or controlled field studies is notably lacking. Instead, molecules to man evolution relies heavily on alleged unique events and scenarios from the remote past, such as the presumed spontaneous origin of life, the supposed natural origin of the genetic code, conjectural common ancestors, alleged speciation events and a host of other such unrepeatable episodes. This amounts to a lot of special pleading that is impossible to test. Evolutionary theory is dominated by narrative scenarios that lack rigor and are too plastic for unambiguous testing or for use in making secure predictions. There is no mathematical framework that enables well defined predictions to be made about future directions of evolution or what new species evolution will generate. Observations about an organism's past and present are simply fitted, as best may be, to some imaginary preconceived scenario. In molecular biology most advances actually owe nothing to evolutionary biology but came about by genetic engineering, that is, by the application of human intelligence and

artificial selection to biological systems. Examples of this include medicines such as insulin and human growth hormone (which are now produced in bacteria), genetically modified (GM) mice that are being used for research purposes and insect resistant and/or herbicide tolerant crops that have been commercialized. The green fluorescent mice engineered at Caltech and the recent assembly of a bacterial cell with a chemically synthesized genome at the J. Craig Venter Institute,¹⁷ were splendid achievements of genetic engineering.

Assessing the Limits of Neo-Darwinian Evolution

The actual conclusion emerging from quantifiable research is that there are definite limits on the biological change that can be achieved by natural selection acting in conjunction with random mutations. Experiments with microorganisms, fruit flies, nematode worms and house mice all showed that once mutational changes reach a certain, quite limited amount of alteration, the organism simply dies or its offspring become sterile. Biologist Michael Behe assembled a mass of compelling evidence for this conclusion in his important book *The Edge of Evolution*.¹⁸ Concerning bacterial evolution Behe wrote:

Over the past decade *E. coli* has been the subject of the most extensive laboratory evolution study ever conducted. Duplicating about seven times a day, the bug has been grown continuously in flasks for over thirty thousand generations. Thirty thousand generations is equivalent to about a million human-years. And what has evolution wrought? Mostly devolution. Although some marginal details of some systems have changed, during the thirty thousand generations, the bacterium has repeatedly thrown away chunks of its genetic patrimony, including the ability to make . . . RNA. . . . Nothing of remotely similar elegance has been built. The lesson of *E. coli* is that it's easier for evolution to break things than to make things.¹⁹

Behe suggested that malaria is the best test case for Darwin's theory. There is an enormous population of mosquito-borne parasites that have focused intense and unyielding selective pressure on their human targets. Hundreds of different mutations that confer some measure of resistance to malaria have been identified in the human genome. Some of these are claimed by biologists as among the best examples of evolution. However, the outcome is very different from that expected by neo-Darwinists. The changes in the human genome, in response to malaria, as well as the amendments to the parasite's genome, point to radical limits on the effectiveness of random mutation. The best known mutation is the substitution of a single amino acid in the blood protein hemoglobin. This causes the condition known as sickle-cell (SC) anemia from the misshapen appearance of the red blood cells. Those with the single SC mutation survive in greater numbers and pass on their "beneficial" mutation. However, this benefit is self-limiting. While only a small proportion of the population has the SC mutation, the next generation will inherit only one copy with consequent benefit. As the mutated gene multiplies, greater numbers of people will inherit both parts of the mutated pair and become victims of full SC anemia leading to disability and shortened life spans. Inevitably the gene pool will stabilize at a certain level. Thus, the SC mutation can never "take over" completely. However, complete takeover is necessary for evolution to advance.

The malaria parasite has never developed a counter to the SC mutation, although it has mutated to produce resistance to a variety of antimalarial drugs including chloroquine and atovaquone. In

each case as soon as the drug was withdrawn from use the resistant strains of the parasite died out. Behe arrived at two important conclusions from reviewing cases of drug resistance with a range of organisms including *E. coli*, the AIDS virus and warfarin resistance in rats.²⁰ First, “beneficial” mutations invariably entail harm to the gene function and weaken the organism relative to its original variety. Second, known “beneficial” mutations only produce trivial changes and no new biological structures are ever formed.

The DNA Revolution

In the 1980s gene sequencing – the ability to determine the precise sequence of the nucleotides – gradually became easier and more widespread. Huge strides were taken during the 2000s when automated DNA sequencing instrumentation became available. More and more genes have been sequenced, culminating in February 2001 with publication of the complete human genome. This technique put a powerful new tool into the hands of evolutionary scientists and opened a whole new window onto the study of biological relationships.

Junk DNA: From Rubbish to Essential Resource. Evolutionary biologists made the firm prediction that the genomes of modern organisms would be full of fossil DNA left over from previous ancestors but no longer useful. Coyne predicted:

We expect to find, in the genomes of many species, silenced, or “dead,” genes: genes that once were useful but are no longer intact or expressed. In other words, there should be vestigial genes. In contrast, the idea that all species were created from scratch predicts that no such genes would exist, since there would be no common ancestors in which those genes were active.²¹

In its early days gene sequencing was a slow and difficult process, so workers concentrated on RNA and a few widely distributed enzymes. At first it seemed that the evolutionary scenario would be confirmed. Geneticists discovered huge amounts of DNA that didn’t seem to be used in building proteins. The term “junk DNA” came into popular use. At one time 98 percent of the human genome was said to be junk. Some of this material was called pseudogenes, some was called transposons and so on. Evolutionary literature filled up with jubilant claims that the above prediction had been amply fulfilled.

But events have overtaken and thoroughly overturned this view. Evidence pouring in from genome-sequencing projects shows that virtually all of an organism’s DNA is transcribed into RNA, and that even though most of that RNA is not translated into proteins, it performs other essential regulatory functions. Every month, science journals publish articles describing more such functions. The evidence has been remorselessly accumulating that “pseudogenes” and other so-called junk DNA sequences are not useless after all.

One big surprise was the comparatively small size of the human genome – only about thirty thousand genes. Some plants and trees, supposedly much earlier in the evolutionary chain, have over forty thousand! It was evident that genes alone could not account for the structural and metabolic complexity of organisms. The 98 percent of the human genome that does not code for proteins plays an important role in how the gene-coding regions are activated and read. Typical of well-informed statements reflecting current research is that of Princeton’s Professor David Stern:

Research has shown that instructional regions outside the protein-coding region are important for regulating when genes are turned on and off. Now we're finding that additional copies of these genetic instructions are important for maintaining stable gene function even in a variable environment, so that genes produce the right output for organisms to develop normally.²²

In fruit flies, for example, one such regulatory role was found to be that of enhancing the transcription of DNA to RNA, thus conferring additional robustness on the organism.²³ Another report dealt with a retrotransposon, found in at least eight different places in the mouse genome. It was originally considered to be a vestigial gene. However careful study showed that obese mice that did not possess this retrotransposon had higher blood glucose, more fat in their livers and were more prone to diabetes than obese mice carrying the supposedly useless retrotransposon.²⁴ It is becoming increasingly clear that "junk DNA" is a misnomer and that all DNA is an essential resource. Frank Slack, reporting on a symposium with the theme "Regulatory RNAs," remarked:

These RNAs direct such diverse processes as gene silencing, transcriptional and translational control, imprinting, and dosage compensation. These discoveries have electrified the biological community as we try to understand the extent of the "RNA world" and how regulatory RNAs work in controlling gene expression. We are fast learning that large portions of the genome that do not code for proteins are in fact transcribed, and that these regions, previously thought to be "junk," may be useful after all.²⁵

It is increasingly evident that evolutionists' predictions of dead and vestigial DNA have been convincingly refuted.

Uprooting Darwin's Tree of Life. Charles Darwin believed that the evolutionary ascent of all species through time could be represented by what he termed the "tree of life" – in modern parlance the phylogenetic tree. This tree stemmed from some universal common ancestor and grew through a trunk dividing into branches representing individual species. The tree was a powerful and picturesque way of illustrating how every species that ever lived was supposed to be related to all others, right back to the origin of life. It is one of the most iconic symbols of neo-Darwinian evolution. Over the last 150 years it has been absolutely central to the thinking of evolutionary biologists, many of whom devoted their entire lives to constructing detailed sections of this tree.

As DNA sequencing techniques became available, an exciting prospect opened of confirming the traditional anatomical phylogenetic tree, by comparison with an independently created molecular tree. The key idea was that the more closely related two species were, the more alike their DNA, RNA and corresponding protein sequences ought to be. The earliest sequencing experiments in the 1970s and 1980s involved RNAs found in ribosomes, the cell's protein-making machines. By comparing RNA sequences from the ribosomes of various plants, animals and microorganisms, molecular biologists began to map the outlines of a tree. The results boded well for evolution. By the mid-1980s there was great optimism that molecular techniques would reveal the definitive, universal tree of life, triumphantly unifying the anatomical and molecular areas of evolutionary biology. These propitious results prompted announcements claiming full vindication of the classic phylogenetic tree in popular science articles, books and presentations.

However, troubling data began to appear in the early 1990s when it became possible to sequence actual DNA from a wide range of organisms. Sometimes these DNA sequences matched the RNA tree, but crucially, sometimes a different tree emerged! W. Ford Doolittle²⁶ and Graham Lawton²⁷ have described recent developments in this area. As more and more genes were sequenced a plethora of different trees began to surface. Some evolutionary biologists began talking about a “forest of trees” while others proposed “nets” or “webs” of relationships. A deluge of negative evidence from the DNA of bacteria and archaea²⁸ effectively shattered the phylogenetic tree concept for the domains of these microorganisms. Dalhousie University biologist Doolittle made the provocative claim that “the history of life cannot properly be represented as a tree.”²⁹

At first it seemed that it was only for microorganisms that the tree need be abandoned. However, as more multicellular genomes were sequenced, ever more incongruous bits of DNA were turning up. “If there is a tree of life, it’s a small anomalous structure growing out of the web of life,” said John Dupré, a philosopher of biology at the University of Exeter. Lawton quotes several experts admitting that recent research reveals that the evolution of animals and plants isn’t exactly treelike either.

Syvanen recently compared 2000 genes that are common to humans, frogs, sea squirts, sea urchins, fruit flies and nematodes. In theory, he should have been able to use the gene sequences to construct an evolutionary tree showing the relationships between the six animals. He failed. The problem was that different genes told contradictory evolutionary stories. This was especially true of sea-squirt genes.³⁰

Having uprooted the tree of unicellular life, biologists were now taking their axes to the remaining branches. According to John Dupré, “It’s part of a revolutionary change in biology,” “Our standard model of evolution is under enormous pressure.” Michael Rose of the University of California, Irvine, went even further: “The tree of life is being politely buried, we all know that,” he said, “what’s less accepted is that our whole fundamental view of biology needs to change.” Michael Syvanen of the University of California, Davis, was equally frank, “We’ve just annihilated the tree of life. It’s not a tree anymore; it’s a different topology entirely.” Of course, not all scientists agree with these sweeping dismissals of the tree of life.³¹ By carefully selecting the data to include and to exclude it is, of course, still possible to construct impressive seeming phylogenetic trees. However, it is clear that this central tenet of neo-Darwinism has lost much of its impact and influence.

Far from confirming the anatomical phylogenetic tree, the independent DNA sequencing method gave results greatly at odds with it. Sadly, this didn’t induce many professional biologists to question the validity of neo-Darwinism itself. Rather, the complex networks molecular biology revealed began to be interpreted in terms of a process called horizontal gene transfer (HGT). It is now supposed that species swap genetic material by hybridization and that viruses, bacteria and archaea pick it up and pass it on.³² Geneticists now believe HGT to be extremely common in all types of organisms. Of course this is highly speculative and involves the acceptance of a whole new range of narrative scenarios, such as (1) the idea that the first multicelled organism resulted from the fusion of bacterial and archaeal precursors; (2) that early on in their evolution, eukaryotes engulfed two free-living prokaryotes giving rise to mitochondria and chloroplasts and (3) that early eukaryotic lineages swallowed one another and amalgamated their genomes, creating yet another layer of horizontal transfer.³³ These are yet more unique and unrepeatable events from the remote

past, not susceptible to controlled scientific testing. Evolution has embarked on another journey into the realms of "promissory science."

*Comparison of Human and Ape Chromosomes.*³⁴ The genomic DNA of many species is tightly wound up in a set of complex packages called chromosomes. Humans possess forty-six chromosomes (twenty-three pairs) containing the approximately thirty thousand genes. Chromosome number 2 is distinctive in being the second largest with more than 237 nucleotide pairs. Evidence came to light in the 1980s and 1990s that chromosome 2 might have arisen from the fusion of two original chromosomes.³⁵ The ends of all chromosomes are marked by repetitive nucleotide sequences called telomeres. It was shown that the *central* region of human chromosome 2 contained a characteristic repeating telomeric sequence, together with its complementary sequence and pretelomeric sequences.³⁶ All chromosomes also have characteristic DNA, termed aphloid sequences, in central regions called centromeres. Evidence was found of more than one such centromere in chromosome 2: adding credence to the idea it resulted from a fusion of two original chromosomes.³⁷ These facts make it probable that at some time in the past two human chromosomes did fuse together to produce chromosome 2. Originally, therefore, *Homo sapiens* may well have possessed a total of forty-eight chromosomes or twenty-four pairs. This probable alteration in the number of human chromosomes is neither unprecedented nor troubling.

Other examples of variation in chromosomal numbers within individual species are known. For example, the male Indian Muntjac deer possesses seven chromosomes and the female six, whereas the Chinese Muntjac has twenty-three pairs of chromosomes in both sexes. They look identical and can interbreed. The evidence is that chromosomal number reduction within certain lineages can readily be tolerated and amounts to a form of microevolution.

Chimpanzees, gorillas and orangutangs possess forty-eight chromosomes. Evolutionary biologists have made comparisons between human chromosome 2 and ape chromosomes 2p and 2q and claim that there is a good match, particularly of the telomere and centromere regions. They conclude that human chromosome 2 came from the fusion of two ancestral ape chromosomes. Ardent evolutionists such as Kenneth Miller³⁸ and Dennis Alexander³⁹ promote their accounts of this as compelling evidence of human descent from apes. It is very significant, however, that a fusion of chromosomes 2p and 2q *is not found in any set of ape chromosomes*. The fusion event does not connect the human genome with any ape genome. What of the supposed match between the two ape chromosomes and human chromosome 2? The original evidence of this was that the high resolution banding pattern of human chromosome 2 aligned well with the banding patterns of ape chromosomes 2p and 2q.⁴⁰ It was also found that human chromosome 2-specific DNA hybridized with chimpanzee chromosomes 2p and 2q.⁴¹ Of course these are comparatively coarse-grained techniques. Evidence soon began to accumulate that the picture was much more complicated than implied by the simplistic accounts of Miller and Alexander. It was reported that secondary aphloid DNA was present not just in human chromosome 2 but also in human chromosome 9.⁴² Subsequent hybridization studies with twenty-one different human aphloid DNA probes and the full range of great ape chromosomes⁴³ revealed that the majority of the human probes *did not hybridize* to their corresponding equivalent ape chromosomes but to noncorresponding chromosomes. Thus, the significance of hybridization results was called into question. Many genes close to the proposed fusion site were also found strewn around on other chromosomes.⁴⁴

With the advent of automatic sequencing techniques it became possible to make direct comparisons of the nucleotide sequences in regions of human and ape chromosomes. A recent review of the results concluded: "The plethora of genetic changes that differentiate humans from their closest relatives the chimpanzees affect multiple levels and are much more complex than was assumed prior to the advent of genomewide comparative analyses."⁴⁵ Further: "The identification of the individual components of the structural divergence between the human and chimpanzee genomes has been accompanied by the discovery of very considerable lineage-specific structural diversity." Numerous human-specific gains and losses of genes were revealed as well as changes in gene expression. It is now evident that the many differences that have been revealed by DNA sequencing between chimpanzee and human chromosomes oppose the notion of common ancestry.

Anatomical Homology: To Be or Not To Be Descendents? Anatomical (and physiological) similarities are observed across many species. For example, the bone structures of the forelimbs of human, pig, porpoise and bat resemble one another. According to evolutionary biologists these homologies are strong evidence of descent from a common ancestor. The information that guides the building of anatomical structures actually "descends" from parent to offspring in the form of the genetic instructions passed on in egg and sperm. Neo-Darwinism predicted therefore that homologous structures would have been built via homologous genes.⁴⁶ Modern DNA sequencing has shown this prediction to be wrong. It was discovered that homologous structures can be produced by different genes and can arise from different developmental pathways.⁴⁷ For instance, the homologous body segments of fruit flies and wasps were found to arise from entirely different developmental pathways.⁴⁸ Neo-Darwinism also predicted that nonhomologous structures should result from nonhomologous genes. Many cases have, however, been found in which the same genes play an important role in building dissimilar features.⁴⁹ The structures and wiring of the eyes of the squid, fruit fly and mouse are very different yet the same gene is involved in the development of all three. Because of the grave difficulties these findings present, many biologists have abandoned the notion that homology is evidence of evolution.⁵⁰

Fossils and Common Descent

Everything that can be gleaned from studying fossils has an important bearing on how plants and animals originated. The dating of fossils is obviously a central issue. Lower geological strata are older than higher strata, except where folding or thrusting has taken place, so relative dating derived from stratigraphic observations can usually be accepted as correct. Placing their confidence in radiometric evidence, the majority of professional paleontologists assign dates from millions to hundreds of millions of years to the strata. The limited space available for this short chapter does not permit a critique of geochronology. Comprehensive and up to date reviews of the evidence, including radiometric data, can be found in two recent books: *Earth's Catastrophic Past* by Andrew Snelling,⁵¹ and *Origin by Design* by Harold Coffin, Robert Brown and L. James Gibson.⁵² These treatises, and the survey provided in chapter 15, present a large body of evidence, radiometric and otherwise, that strongly supports much younger dates.

Evolutionary scientists insist that the fossil record manifests strong support for common descent as enshrined in the neo-Darwinian synthesis. Unfortunately, fossilized remains are not unearthed with pedigree certificates attached! Furthermore, in most instances, the mineralized

nature of fossils makes it impossible to extract DNA for family relationships to be verified by DNA profiling. Connections are therefore based on the professional opinions of the paleoanthropologists, usually strongly influenced by evolutionary orthodoxy. To determine whether the fossil record really demonstrates ancestral connections it is necessary to carefully examine and evaluate the broad patterns that have emerged from paleontological studies. It is now over 150 years since the publication of Darwin's theory catalyzed a vast upsurge of paleontology intended to confirm evolutionary predictions. In fact, very mixed signals have been obtained.

Features of the Fossil Record Appearing to Support Neo-Darwinism.

1. The fossil succession shows a pattern of appearances and disappearances as expected if new species were evolving and displacing less competitive forms. For instance, trilobite fossils appear in Cambrian strata and then disappear in Permian strata. Glossopteridales (a seed fern type of plant) crop up at the beginning of the Permian but dwindle to extinction by the end of the Permian period. Ichthyosaur fossils (dolphinlike creatures) appear during the early to middle Triassic and disappear in the late Cretaceous. Dinosaur fossils appear during the middle to late Triassic and then disappear during a Cretaceous–Tertiary extinction event.

2. The fossil record seems to show an uneven trend from simple species in the earliest strata to complex in the most recent strata.

3. Neo-Darwinists also claim that the predicted “intermediate” or “transitional” forms between branches of the evolutionary tree have been found for a large number of transitions. A selection of notable and oft quoted progressions is worth citing here. The migration of eyes to one side of the flatfish head is seen in a series of fossil fish.⁵³ The transition from fish (*Eusthenopteron*) to amphibian (*Acanthostega* and *Ichthyostega*) is supposed to have taken place via the intermediate species *Panderichthys* and *Tiktaalik*.⁵⁴ A series of “mammal-like reptiles” (protomammals) from the late Permian is often cited to illustrate the transition from reptiles to mammals.⁵⁵ The famous *Archaeopteryx* fossil from the late Jurassic is declared to be a clear transitional form between dinosaurs and birds.⁵⁶ Another superficially impressive sequence of fossils is held to illustrate the movement of animals from land to water.⁵⁷ This sequence, beginning with *Indohyus* (a raccoonlike creature) and *Pakicetus* (a doglike creature with hoofed feet from the Eocene)⁵⁸ and ending with baleen whales and dolphins, is claimed as one of the best examples of an evolutionary transition.

Features of the Fossil Record Opposed to Neo-Darwinism. On the other hand, several well attested general fossil patterns are distinctly opposed to neo-Darwinian common descent:

1. Sudden emergence of new life-forms. The fossil record doesn't show continuous gradual evolution, as expected for the neo-Darwinian mechanism, but rather new life-forms appear abruptly without predecessors. The most spectacular example of this is the “Cambrian explosion,” documented from early Cambrian rocks, when more than half the major animal groups (phyla) appeared abruptly, apparently from nowhere, without transitional fossils or common ancestors. Very few fossils, except for microorganisms, are known from earlier Precambrian strata. Such sudden appearances are actually the norm in the geological column. Other striking examples include the “mammalian radiation” of the Paleocene, when fifteen new mammalian orders suddenly appear. Then there is the “angiosperm big bloom” in the Cretaceous, which saw the rapid appearance of numerous species of flowering plants. Influential evolutionary paleontologist George Gaylord Simpson wrote:

It is a feature of the known fossil record that most taxa appear abruptly. They are not,

as a rule, led up to by a sequence of almost imperceptibly changing forerunners such as Darwin believed should be usual in evolution. . . . When a new genus appears in the record, it is usually well separated morphologically from the most nearly similar other known genera. This phenomenon becomes more universal and more intense as the hierarchy of categories is ascended.⁵⁹

More recently University of Chicago paleontologist David M. Raup stated:

Most people assume that fossils provide a very important [evidence] . . . in favor of the Darwinian interpretation of the history of life. Unfortunately, this is not strictly true. . . . [s]pecies appear in the sequence very suddenly, show little or no change during their existence in the record, then abruptly [disappear].⁶⁰

2. Stasis – fossils remain essentially anatomically unchanged throughout the whole time they appear in the record. The stability of animal and plant forms is a feature within and across every geological period. Fossil crane flies from the Eocene are indistinguishable from modern ones; as are fossil herrings from the same epoch. Fossil sea urchins from the Cretaceous closely resemble their modern counterparts. Fossil ferns from the Carboniferous bear an uncanny resemblance to modern day equivalents. The internal and external structures of chambered nautilus shells are virtually unchanged since the Devonian period. Even fossilized comb jelly from the Cambrian is identical in form to modern, living comb jelly.⁶¹ The observed stasis is a serious challenge to the neo-Darwinian picture of transformation with modification.

3. Lack of transitional fossils. Far too few transitional fossils have been discovered. Darwin expected “innumerable” intermediates in “finely graduated chain(s)” to be uncovered. The differences in anatomy and physiology between major taxa are large and profound. For example, humans differ from the great apes in the following ways: upright stance, distinctive back, pelvis and knees, arched feet, flat face, large semicircular ear canals, opposed thumbs, advanced throat, unique brain. All these differences could not have come about as the result of one or two beneficial mutations but require a multiplicity of coordinated alterations spanning a large number of intermediates. The putative family tree for *Homo sapiens* jumps from the *australopithicines*, which are all very apelike,⁶² to *Homo erectus*, which virtually everyone acknowledges was fully human.⁶³ The only serious contender as an intermediate form is *Homo habilis*. However, there have always been problems with the large range of sizes of the fossil cranial and postcranial material of this taxon. Many leading paleontologists consider that the *Homo habilis* fossil material actually represents at least two, if not three, different species that have mistakenly been amalgamated.⁶⁴ It is quite evident there are far too few intermediates in the evolutionary hominid-to-human scenario, which remains highly unsatisfactory.

Darwin was right that the substantial and extensive diversity in morphology between taxa imply many transitional forms. The reality is that in 150 years of intense collecting comparatively few transitional sequences have been discovered and many of these have unsatisfactory aspects. Leading evolutionary biologist Ernst Mayr wrote in 2002:

Given the fact of evolution, one would expect the fossils to document a gradual steady change from ancestral forms to the descendents. But this is not what the paleontologist finds. . . . New types often appear quite suddenly, and their immediate ancestors are

absent in the earlier geological strata. The discovery of unbroken series of species changing gradually into descending species is very rare. Indeed the fossil record is one of discontinuities, seemingly documenting jumps (saltations) from one type of organism to a different type.⁶⁵

Unconvincing Transitional Fossils. Many of the evolutionary series presented in textbooks display only small changes from one variety of the same species, genus or family to another; these are consistent with microevolution. The eye migration to the upper side in flatfish, referred to above, is simply a minor rearrangement of existing structures; nothing new is created, and it falls into this category. Although *Tiktaalik* was hailed as “one of the greatest fulfilled predictions of evolutionary biology”⁶⁶ the fact is that the radial-like bones and wristlike structure of *Tiktaalik*’s front fins are scarcely different from those of some other fish.⁶⁷ Furthermore, *Tiktaalik*’s rear fins remain unmistakable fins. It is obvious that many additional transitional forms would be needed to provide a convincing evolutionary sequence from fish to amphibians. There are problems too with the “mammal-like reptile” fossils. These were found in geographically widely separated areas. Then textbooks such as that of Kemp shrink some skulls and enlarge others to make them appear more similar than they actually are.⁶⁸ The fossil-based family tree of placental mammals⁶⁹ is very different from the one derived from DNA comparisons.⁷⁰

The supposed dinosaur to bird evolutionary sequence is also subject to much debate. In the first place, what have been called fossils of “nonflying feathered dinosaurs” have been discovered out of sequence in much younger strata. Then *Archaeopteryx* has fully functional wings and feathers similar to those of modern birds comprising hollow stems, barbs and barbules.⁷¹ The anatomical requirements for flight include airfoil wings, light bone structures, body streamlining, a specialized pectoral girdle and wing bones, special thoracic musculature, special respiratory and circulatory systems.⁷² *Archaeopteryx* gives no clues as to how feathers or wings might have originated from reptile scales. It is quite evident that many more transitional fossils would be needed to establish dinosaur to bird evolution with anything approaching scientific rigor. The general picture is that transitional sequences are sparse and inadequate.

Anachronistic Fossils. Evolutionary scientists often claim that the lack of “out of place” fossils in the geological record is strong evidence of the validity of neo-Darwinism. For instance, Dawkins and Coyne wrote:

[N]ot a single authentic fossil has ever been found in the “wrong” place in the evolutionary sequence. Such an anachronistic fossil, if one were ever unearthed, would blow evolution out of the water. As the great biologist J. B. S. Haldane growled, when asked what might disprove evolution, “Fossil rabbits in the pre-Cambrian.”⁷³

Of course, there is a great deal of flexibility about exactly what the right evolutionary sequence is. However, in practice, the evolutionary establishment has an arsenal of brutally effective methods for dealing with anachronistic fossils.

To begin with, geochronology is far from an exact science. Different dating methods frequently give discordant results. Samples for radiometric dating may contain contamination from younger material or from older source rock so that the “right” date can usually be found, either by “selection” from available samples or by selection from the range of dates. A nice example of this process

unconsciously in action during the controversy over the date of skull KNM ER 1470 from the Lake Turkana region of Kenya is described by Roger Lewin.⁷⁴ Nor would grossly out of place fossils like rabbits in the Precambrian present any threat to evolution. Evolutionary paleontologists are certain such fossils are impossible and therefore they *always* classify them as intrusive, that is, buried at a later date by human or natural means, or they are labeled frauds. Enough doubt can always be sown to discredit findings that contradict the evolutionary consensus. Cremo and Thompson have documented a large number of anachronistic fossils and artifacts in their book *Forbidden Archaeology*.⁷⁵ They also describe some of the extremes to which evolutionary scientists have resorted to discredit them, such as claiming remains have been transported to lower levels by rodents or dubbing footprints “erosional markings.” Although many anachronistic fossils have been found, evolution routinely shrugs them off.

Evaluating the Fossil Evidence. Only naive and uncritical individuals, mesmerized by evolutionary rhetoric, could agree with statements like the following from Alexander: “Every twig and branch of the great bush of life can be traced back in time to the trunk and the roots from which the whole bush originates.”⁷⁶ The balance of the fossil evidence tips decidedly against support for neo-Darwinian common descent. Popular accounts of evolution ignore the problem of sudden appearances and exaggerate the significance and extent of supposed intermediates. A vast blizzard of hype surrounds the find of any new potential transitional fossil. For instance, press reports on the lemurlike fossil “Ida” (*Darwinius*) hailed it as “the missing link between us humans and our primate kin,” “the eighth wonder of the world,” “the Holy Grail” and “a Rosetta Stone.” Then almost within months came considered scholarly rejections of Ida: “We have analysed a large data set based on observations we have made on almost 120 living and extinct primates and what we find . . . [is that] *Darwinius* [is] not part of our ancestry”⁷⁷ and, “I am utterly convinced that *Darwinius* has nothing whatsoever to do with the origin of higher primates.”⁷⁸ Such assessments were allowed to rest quietly buried in science periodicals. The barrage of hype is telling evidence of neo-Darwinism’s desperate need of convincing transitional forms. If the situation were really as described by Alexander (and Coyne) a new intermediate fossil would be routine and of interest to only a modest circle of specialists. The punctuated equilibrium scenario to account for the lack of transitional forms has not gained wide acceptance because it lacks a mechanism to account for the large jumps.⁷⁹ Neo-Darwinism finds minimal support in the fossil record, but its proponents remain convinced of its validity because of their total commitment to naturalist dogma, theistic evolution or some other ideology.

Downsizing Neo-Darwinism

The scientific evidence reviewed in this chapter demonstrates that neo-Darwinian evolution is an overblown concept in urgent need of downsizing. Modern DNA sequencing is steadily disproving neo-Darwinism’s prediction of genomes containing vestigial, dead DNA. This technique has also uprooted Darwin’s iconic tree of life and has revealed that anatomical homology is not evidence of common descent. The broad patterns that have emerged over many years of fossil collecting are rather negative for the neo-Darwinian evolutionary scheme. The sudden emergence of new species, the lack of alteration in their fossil remains over geological time periods and the comparatively meager and unsatisfactory series of transitional forms, present a serious challenge to orthodox evolution.

What many field studies and controlled genetic experiments with diverse living organisms have actually shown is that there are strict limits to the biological change that mutations coupled with natural selection can accomplish. These changes usually produce no more than new varieties confined to the species or genus levels. Evidence for macroevolutionary changes leading to the origin of genuinely new species with new genomic information, new body plans or new complex subcellular structures is completely lacking.

Grand universal neo-Darwinism implies spontaneous increases in complexity and organization, together with a natural expansion of information content in biological systems. This is in serious conflict with the second law of thermodynamics, which states the opposite is true. Disorder and chaos always increase in closed systems; and in open systems, too, unless a functional machine is present to make use of an energy or matter throughput.⁸⁰ Restricting the scope of neo-Darwinism to minor microevolutionary events enables the inconsistency of evolutionary biology with this law of physics to be avoided.

It is clear that the fossil record and genetic studies are in agreement with the traditional Christian understanding of “kinds” designed and made with the ability to adapt to changing geographical and ecological conditions. It is high time that neo-Darwinian evolution joined all the other grandiose, universal nineteenth century systems in being drastically scaled down. Evolution’s pretensions to be a grand universal paradigm, encompassing vast reaches of biological science, have not stood up. Evolution in any guise ought now to be recognized for what it is – a limited theory that may help to explain minor changes and adaptations. Certainly, microevolution cannot explain the origin of life or the origin of species and its influence in theology and philosophy ought to be negligible.

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Chapter 14

A SURVEY OF SCIENTIFIC OPINION CRITICAL OF EVOLUTIONARY THEORY

L. James Gibson

A review of scientific opinion that is skeptical about aspects of evolutionary theory involves a number of challenges. First, the term “evolution” is used with such a variety of meanings that it is not circumscribed in a single definition. Second, evolution is a theory about history, which means it is exceptionally difficult to test. Third, the theory has enormous philosophical implications that often restrict the way in which empirical evidence is interpreted. Fourth, the experts themselves disagree on many aspects of evolutionary theory, being united primarily by their opposition to any supernatural involvement. In this paper, I will review each of these points, and then discuss five major questions, noting some of the arguments scientists use against various ideas within evolutionary theory. Most of the scientists quoted here are evolutionists; a few are theists or of unknown persuasion. All evolutionary biologists, by definition, believe in common ancestry and descent with modification, regardless of any potential misgivings about the mechanism. The purpose of these quotations is not to show that evolutionists don’t believe in evolution, since clearly they do. The point is that many informed scientists have strong doubts about major aspects of the general theory of evolution.

Some naturalistic scientists vehemently object to such efforts, labeling them “quote-mining,”¹ as though it is illegitimate to use expert testimony to point out the problems in evolutionary theory. Others feel that evolutionary theory does not deserve any special, protected status, and we ought to be informed on a theory’s weaknesses. Canadian biologist W. R. Thompson wrote, in a 1956 introduction to Darwin’s *Origin of Species*:

As we know, there is a great divergence of opinion among biologists, not only about the causes of evolution but even about the actual process. This divergence exists because the evidence is unsatisfactory and does not permit any certain conclusion. It is therefore right and proper to draw the attention of the non-scientific public to the disagreements about evolution. But some recent remarks of evolutionists show that they think this unreasonable. This situation, where scientific men rally to the defence of a doctrine they are unable to define scientifically, much less demonstrate with scientific rigour, attempting to maintain its credit with the public by the suppression of criticism and the elimination of difficulties, is abnormal and undesirable in science.²

“Evolution” and Equivocation

As generally understood “evolution” means the theory that all species have descended from

a common ancestor through strictly naturalistic processes over long ages of time. This theory is known as “Darwinism” or “neo-Darwinism.” However, “evolution” is also defined as “change in gene frequencies over time” or even merely “change over time.” One often finds arguments in which evidence for evolution defined narrowly is used to attempt to affirm evolution in the broader meaning of the word. As Berkeley law professor and “dean” of the intelligent design movement Phillip Johnson observed:

These propositions go far beyond anything empirical science can demonstrate, of course, and to sustain this worldview Darwinists had to resort to all the tactics that Popper warned truth-seekers to avoid. Their most important device is the deceptive use of the vague term “evolution.”

“Evolution” in Darwinist usage implies a completely naturalistic metaphysical system, in which matter evolved to its present state of organized complexity without any participation by a Creator. But “evolution” also refers to much more modest concepts, such as microevolution and biological relationship. The tendency of dark moths to preponderate in a population when the background trees are dark therefore demonstrates evolution – and also demonstrates, by semantic transformation, the naturalistic descent of human being from bacteria.

If critics are sophisticated enough to see that population variations have nothing to do with major transformations, Darwinists can disavow the argument from microevolution and point to *relationship* as the “fact of evolution.” Or they can turn to biogeography, and point out that species on offshore islands closely resemble those on the nearby mainland. Because “evolution” means so many different things almost any example will do. The trick is always to prove one of the modest meanings of the term, and treat it as proof of the complete metaphysical system.³

This switching of definitions in midargument is a form of equivocation, which ought to be avoided. Clarity of expression is highly desirable in this as in all other fields.

Evolution as an Experimental or Historical Question

There are important differences between historical questions and experimental questions in science.⁴ Evolution in the sense of universal common ancestry is a historical question, and is not amenable to experimentation. In these circumstances, the appropriate way to proceed is the method of “multiple hypotheses.”⁵ One first proposes as many potential explanations (hypotheses) as one can imagine, and then tries to rule out as many as possible. Two professors of cognitive science, Jerry Fodor, Rutgers, and Massimo Piattelli-Palmarini, University of Arizona, identified an important difference between historical and experimental science:

Very roughly, historical explanations offer (not laws but) plausible narratives; narratives that purport to articulate the causal chain of events leading to the event that is to be explained. Nomological explanations are about (metaphysically necessary) relations among properties; historical narratives are about (causal) relations among events.⁶

According to Fodor and Piattelli-Palmarini evolution is a history, not a scientific theory:

History (natural history included) is about what actually happened; it's not about what had to happen; or even about what would happen if Mother Nature were to try again. What had to happen is the domain of theory, not of history; and there isn't any theory of evolution.⁷

The historical nature of general evolutionary theory makes it difficult, if not impossible, to test it scientifically. In the view of some scientists, historical questions can never be part of science. Evolutionary biologist Colin Patterson of the British Museum (Natural History) wrote:

Taking the first part of the theory, that evolution has occurred, it says that the history of life is a single process of species-splitting and progression. This process must be unique and unrepeatable, like the history of England. This part of the theory is therefore a historical theory, about unique events, and unique events are, by definition, not part of science, for they are unrepeatable and so not subject to test.⁸

The historical character of evolutionary theory is widely recognized but the implications are not so widely appreciated. The point is not that historical questions cannot be studied rigorously, but that one must be cautious about accepting answers to historical questions as fact. Science often has difficulty in reaching conclusions with questions that can be tested experimentally – much more so with questions of history.

Philosophical Bias in Science and Evolution

Science as currently practiced is restricted to “methodological naturalism.” Simply put, this means that scientific explanations are restricted to natural causes. This results in some strange conclusions. Well-known atheist biologist Richard Dawkins, Oxford University, states, “Biology is the study of complicated things that give the appearance of having been designed for a purpose.”⁹ Dawkins then followed up on this statement with an extensive argument that we should not trust the appearances. Surely this reflects a philosophical bias more than the actual evidence.

Philosophical bias against divine activity is a major factor in maintaining the dominance of evolutionary philosophy. Perhaps the most famous expression of the materialism undergirding evolutionary theory comes from the evolutionary biologist Richard Lewontin of Harvard University:

Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. We take the side of science *in spite* of the patent absurdity of some of its constructs, *in spite* of its failure to fulfill many of its extravagant promises of health and life, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot

allow a Divine Foot in the door. The eminent Kant scholar Lewis Beck used to say that anyone who could believe in God could believe in anything. To appeal to an omnipotent deity is to allow that at any moment the regularities of nature may be ruptured, that miracles may happen.¹⁰

Christians who wish to work toward harmony between faith and science should keep in mind the philosophical bias against the supernatural in science, and avoid indiscriminate acceptance of scientific claims that have been forced through the filter of philosophical naturalism.

Evolutionary Theory Is Not Defined Clearly Enough for Scientific Use

As a historical issue, evolution is subject to much speculation and considerable difference of opinion. It is no surprise that evolutionists are perceived as having difficulty agreeing on what the theory is and how it works. Antoni Hoffman, a committed neo-Darwinian, wrote:

Chapter 3 then presents the neo-Darwinian paradigm of evolution, or rather what I think should be understood under this heading. There are nearly as many interpretations of neo-Darwinism as there are evolutionary biologists, and I do not pretend to offer here either a consensus, or the most appropriate view. I believe, however, that my interpretation is both internally coherent and sufficiently broad, though not all-encompassing, to be consistent with the opinions of the majority of those who call themselves neo-Darwinians.¹¹

The precarious state of evolution as science is sometimes openly recognized, such as by the outspoken atheist and evolutionary biologist Jerry Coyne, University of Chicago:

In science's pecking order, evolutionary biology lurks somewhere near the bottom, far closer to phrenology than to physics. For evolutionary biology is a historical science, laden with history's inevitable imponderables. We evolutionary biologists cannot generate a Cretaceous Park to observe exactly what killed the dinosaurs; and, unlike "harder" scientists, we usually cannot resolve issues with a simple experiment, such as adding tube A to tube B and noting the color of the mixture.¹²

According to biologist Philip Skell, a member of the National Academy of Sciences (USA), evolutionary theory is not particularly useful in actual biological research. Quoting A. S. Wilkins, editor of the journal *BioEssays*, who wrote in 2000, "Evolution would appear to be the indispensable unifying idea and, at the same time, a highly superfluous one," Skell comments, "I would tend to agree." He then explains:

Certainly, my own research with antibiotics during World War II received no guidance from insights provided by Darwinian evolution. Nor did Alexander Fleming's discovery of bacterial inhibition by penicillin. I recently asked more than 70 eminent researchers if they would have done their work differently if they had thought Darwin's theory was wrong. Their responses were all the same: No.

I also examined the outstanding bio-discoveries of the past century: the discovery of the double helix; the characterization of the ribosome; the mapping of genomes;

research on medications and drug reactions; improvements in food production and sanitation; the development of new surgeries; and others. I even queried biologists working in areas where one would expect the Darwinian paradigm to have most benefited research, such as the emergence of resistance to antibiotics and pesticides. Here, as elsewhere, I found that Darwin's theory had provided no discernible guidance, but was brought in, after the breakthroughs, as an interesting narrative gloss.¹³

The flexibility of evolutionary theory to accommodate any observation and explain any fact should alert the reader to the philosophical nature of the theory. Evolution is not a theory to be tested, but a worldview to be applied to the study of nature. In this sense, as well as in its attempt to explain origins, it is similar to religious beliefs, such as creationism.

1. Questions About Abiogenesis

The origin of life is itself not a necessary part of the theory of biological evolution, but it is important to the philosophical basis of evolutionary theory. The lack of a plausible naturalistic scenario for the origin of life is a stubborn problem for the naturalistic philosophy that underlies evolutionary theory. George Wald, a 1967 Nobel Prize-winner for Physiology or Medicine, described the problem this way:

We tell this story [abiogenesis] to beginning students of biology as though it represents a triumph of reason over mysticism. In fact it is very nearly the opposite. The reasonable view was to believe in spontaneous generation; the only alternative, to believe in a single, primary act of supernatural creation. There is no third position. For this reason many scientists a century ago chose to regard the belief in spontaneous generation as a "philosophical necessity." It is a symptom of the philosophical poverty of our time that this necessity is no longer appreciated. Most modern biologists, having reviewed with satisfaction the downfall of the spontaneous generation hypothesis, yet unwilling to accept the alternative belief in special creation, are left with nothing.¹⁴

The problems in abiogenesis are so great that many scientists have just set them aside as insoluble. Among these is Francis Crick, 1962 Nobel Prize-winner for Physiology or Medicine:

An honest man, armed with all the knowledge available to us now, could only state that in some sense, the origin of life appears at the moment to be almost a miracle, so many are the conditions which would have had to have been satisfied to get it going.¹⁵

Despite the reference to miracles, Crick will only consider naturalistic processes, "But this should *not* be taken to imply that there are good reasons to believe that it could not have started on the earth by a perfectly reasonable sequence of fairly ordinary chemical reactions."¹⁶

The problem of the origin of life is a thorn in the side of naturalistic philosophy. In the view of many, it falsifies naturalism and is explained more readily by some form of theism.

2. Questions About Universal Common Ancestry (Monophyly)

One should not expect to find doubts about universal common ancestry among believers in the general theory of evolution. After all, those who doubt universal common ancestry would be expected

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to reject neo-Darwinism and opt for an alternative model. Nevertheless, a few materialistic scientists have suggested that life might be polyphyletic (of multiple ancestry) after all. Among these are biochemists Christian Schwabe and Gregory Warr, both at Medical University of South Carolina, who critique current theories of evolution, suggesting a polyphyletic, but still naturalistic, origin of life:

We believe that it is possible to draw up a list of basic rules that underlie existing molecular evolutionary models:

1. All theories are monophyletic [a single common ancestor for all life], meaning that they all start with the Urgene [hypothetical ancestral gene] and the Urzelle [hypothetical ancestral cell] which have given rise to all proteins and all species, respectively.
2. Complexity evolves mainly through duplications and mutations in structural and control genes.
3. Genes can mutate or remain stable, migrate laterally from species to species, spread through a population by mechanisms whose operation is not fully understood, evolve coordinately, splice, stay silent, and exist as pseudogenes.
4. Ad hoc arguments can be invented (such as insect vectors or viruses) that can transport a gene into places where no monophyletic logic could otherwise explain its presence.

This liberal spread of rules, each of which can be observed in use by scientists, does not just sound facetious but also, in our opinion, robs monophyletic molecular evolution of its vulnerability to disproof and thereby of its entitlement to the status of a scientific theory.¹⁷

At least three patterns in the fossil record seem discordant with expectations based on monophyly:

1. *The ubiquity of abrupt appearance suggests discontinuity rather than monophyly.* Abrupt appearance is a common, although not universal, feature of the fossil record. One class of abrupt appearances involves the simultaneous appearance of numerous taxa, a pattern called a “radiation.” In addition to the Cambrian explosion, other radiations include Eocene bats,¹⁸ Cretaceous angiosperms,¹⁹ Paleocene birds,²⁰ Paleocene mammals²¹ and Paleocene teleost fish (Acanthomorpha).²² Radiations lack the series of gradual fossils expected in evolutionary theory. Charles Darwin identified the lack of transitions as a serious problem for his theory saying, “The case at present must remain inexplicable; and may be truly urged as a valid argument against the views here entertained.”²³

Ernst Mayr, long-time evolutionary biologist at Harvard, wrote:

Paleontologists had long been aware of a seeming contradiction between Darwin’s postulate of gradualism, confirmed by the work of population genetics, and the actual findings of paleontology. Following phyletic lines through time seemed to reveal only minimal gradual changes but no clear evidence for any change of a species into a different genus or for the gradual origin of an evolutionary novelty. Anything truly novel always seemed to appear quite abruptly in the fossil record.

This would seem to be a problem, but Mayr adds, “This is not surprising, since new evolutionary departures seem to take place almost invariably in localized isolated populations that are not apt to leave a fossil record.”²⁴

In the Beginning

This argument seems a strange one for a scientist to make: since we cannot find the evidence we ought to find for major evolutionary change, such changes must have happened in “localized isolated populations that are not apt to leave a fossil record.” Maybe the evidence is missing because the postulated evolutionary change never occurred.

2. *The pattern of disparity before diversity is inconsistent with monophyly.* Evolutionary theory would predict that species differences would be small at first, with new higher taxa appearing only late in evolution. The fossil record of multicellular animals (metazoans) reveals the opposite pattern – species differences are large at first appearance, with nearly all higher taxa appearing early, and no higher taxa (phyla and classes) appearing in the uppermost part of the geologic column, the Cenozoic. Stephen Jay Gould, a well-known evolutionist at Harvard, noted:

Measured as number of species, Burgess diversity is not high. This fact embodies a central paradox of early life: How could so much disparity in body plans evolve in the apparent absence of substantial diversity in number of species? – for the two are correlated, more or less in lockstep, by the iconography of the cone. . . . Several of my colleagues . . . have suggested that we eliminate the confusion about diversity by restricting this vernacular term to the first sense – number of species. The second sense – difference in body plans – should then be called disparity. Using this terminology, we may acknowledge a central and surprising fact of life’s history – marked decrease in disparity followed by an outstanding increasing in diversity within the few surviving designs.²⁵

3. *Fossil gaps are systematic, not random, suggesting discrete lineages rather than monophyly.* More fossil intermediates should be found between highly different species than between similar species, but this is not the case. Agnostic biochemist Michael Denton pointed this out:

The fundamental problem in explaining the gaps in terms of an insufficient search or in terms of the imperfection of the record is their systematic character – the fact that there are fewer transitional species between the major divisions than between the minor. . . . But this is the exact reverse of what is required by evolution. Discontinuities we might be able to explain away in terms of some sort of sampling error but their systematic character defies all explanation. If the gaps really were the result of an insufficient search, or the result of the imperfection of the record, then we should expect to find more transitional forms between mouse and whale than between dog and cat.²⁶

For example, the “evolutionary transition” from water to land is a major step in the theory of evolution, and this change should have left abundant fossil evidence.²⁷ The evidence is not up to expectations, as described by evolutionary biologist Malcolm Gordon, University of California at Los Angeles:

No fossils are know[n] that relate directly to the vertebrate transitions to land. . . . The geographic distribution and morphological diversity of the fragmentary remains has posed problems and has led to controversy as to whether amphibians are monophyletic [share a single common ancestor] or polyphyletic [multiple ancestors] and whether

they arose from freshwater or marine fishes.²⁸

These earliest fossil amphibians were already at that time quite large in size, structurally diverse, fairly specialized, and phylogenetically well differentiated from one another. . . . There are no plausible connections between these earliest fossil amphibians and living amphibians. That is, the morphologies of these two groups are so different that there is no scientifically justifiable way to derive the latter group from the former group.²⁹

The mammal-like reptiles have a similar difficulty. Six major groups have been identified, five of which appear simultaneously in the fossil record.³⁰ The various fossils are quite diverse, and few if any of these can be considered ancestral to any other species. Paleontologist David Raup, University of Chicago, noted: "The evidence we find in the geologic record is not nearly as compatible with Darwinian natural selection as we would like it to be. . . . In other words, there are not enough intermediates."³¹

Monophyly is based on parsimony of explanation within a naturalistic metaphysic. If one accepts the possibility of supernatural activity, the evidence is more compatible with polyphyly and some kind of supernatural creation is the most likely explanation.

3. Questions About the Reliability of Estimating Evolutionary Relationships

Doubts About Inferring Relationships on the Basis of Genetic Similarities. Inferences regarding evolutionary relationships are based on patterns of similarities identified as homologous. To say that an organ in one species is homologous with an organ in a different species is to mean that the organ was inherited by both species from a common ancestor. The organ may have been modified differently in the two species, but the underlying genetic basis for development of the organ is expected to be the same.³² Surprisingly, several cases are known in which organs thought to be homologous are controlled by different genes during development. For example, the adult body segments of insects are thought to be homologous, but may be produced by different genes and follow different developmental pathways. Biologists David Mindell, University of Michigan, and Axel Meyer, University of Konstanz, Germany, note:

Alternatively, the genetic basis for important developmental processes can both change and vary among taxa. This is seen in the case of the homeodomain transcription factor [a protein that turns on a gene] *even-skipped* having an important role in pattern formation in *Drosophila* embryos, but not in the locust *Schistocerca americana*, or the wasp *Aphidius ervi*, in spite of homologous structures (segments) being present in all three groups.³³

The opposite effect is also seen. Structures regarded as nonhomologous may be directed by genes that appear to be homologous. For example, the gene "*Distal-less*" (*Dll*) acts in the development of the jointed legs and antennae in *Drosophila*, the limbs of tetrapods, the siphons of tunicates and the tube feet of echinoderms.³⁴ Commenting on this, evolutionary biologist Scott Gilbert, Swarthmore College in Pennsylvania, wrote:

The segmentation of *Drosophila* and the segmentation of vertebrates had been a

classic example of analogy. Yet, here it was seen as being directed by a homologous set of genes. This demonstration of “homologous” genes for “analogous” processes and structures has wreaked havoc with our definitions of analogy and homology.³⁵

Likewise, no one thought the compound eyes of insects were homologous with the eyes of squid or of mammals. It was quite a surprise to discover that a similar gene, called *Pax-6* or *ey*, regulates development of each of these diverse types of eyes. Now scientists are wondering if the various eyes should be regarded as homologous after all, and are searching for criteria to help identify homologies.³⁶

These discoveries raise questions over whether similarities among species are due to descent from a common ancestor or to some other process. One alternative is that the laws of nature constrain development so that only certain morphological patterns are possible.³⁷ A similar idea is that only certain morphological structures are viable in living organisms. This has been articulated by geosciences professor R. D. K. Thomas, Franklin and Marshall College in Pennsylvania:

The constraints of geometry, growth patterns, and raw materials, on which we have focused in this paper, constitute formal causes of skeletal design. These do explain the convergence of numerous lineages on general patterns and the relatively complete exploitation of design elements defined in the skeleton space.³⁸

Doubts About Molecular Homology. Molecules inherited from a common ancestor are said to be homologous. Homologies are the basis upon which evolutionary relationships are proposed. One problem with using molecular homologies in evolutionary studies is that comparisons of different molecules may point to different evolutionary trees. A common explanation is that genes have been transferred “horizontally,” perhaps by a virus that was transmitted from one species to another, carrying a gene with it. However, if genes are easily transmitted among different lineages, the argument that they can be used for tracing common ancestry is greatly weakened. These features also raise questions about the monophyly of life. Microbiologist Michael Syvanen, University of California at Davis, suggested that horizontal gene transfer makes it impossible to identify any common ancestor, if such a thing even existed:

There has been recent discussion that horizontal gene transfer is too frequent that it may never be possible to reconstruct the last common ancestor. . . . However, if biochemical unities could be achieved after speciation events by horizontal gene transfer, then there is no reason to postulate that a LUCA [last universal common ancestor] ever existed. If horizontal gene transfer is as common as I am implying, the modern cell could have evolved in multiple parallel lineages. Earliest life could have been truly polyphyletic.³⁹

Another problem with molecular homology is the presence of unique genes, with no known relationship to other genes. Such genes, known as ORFan genes, do not seem to have any evolutionary relationship to other genes,⁴⁰ and their origin is a puzzle according to biochemist Russell Doolittle, University of California at San Diego, who says, “In contrast, there are large numbers of unidentified genes in a variety of organisms that look conventional in every way. Where these unique sequences are coming from and what they do remain baffling mysteries.”⁴¹ Molecular biologist Naomi Siew, Weizmann Institute of Science in Israel, similarly asks:

If proteins in different organisms have descended from common ancestral proteins by duplication and adaptive variation, why is it that so many today show no similarity to each other? Why is it that we do not find today any of the necessary “intermediate sequences” that must have given rise to these ORFans?⁴²

Scott Peterson, J. Craig Venter Institute, suggested that one possible explanation is that many genes may have originated independently, and so do not necessarily indicate evolutionary relationships: “A third, and extremely interesting, possibility is that many gene functions have evolved independently more than once since the beginning of cellular life on the planet.”⁴³

Perhaps the idea of molecular homology should be abandoned. Biologist Ford Doolittle, Dalhousie University, Nova Scotia, wrote, “Homology is still a funny word: in the context of proteins and genes, it makes sense only if we don’t think about it too deeply.” He then adds:

If there was no ancestor, however, how can we avoid thinking about the possibility that all genes are ultimately derived from a single short RNA, the first replicating ribozyme. If this is true, *all genes are homologous*. We might still be able to distinguish between orthologs [the same members of a gene family] and paralogs [different members of a gene family, the result of a gene duplication], as a matter of logical principle but, in practice, this will often be impossible. “Homology” itself becomes a useless word unless we redefine it to mean something like “statistically more similarity than we would expect on the basis of chance”. Such an operational definition is slippery – genes can fade in and out of a state of homology depending on the kinds of analysis and the background database within which we compare them. It’s a short step from here back to “percent homology.” It is ironic that the words we seem to need in order to think productively about biology, words such as “homology”, “individual”, “organism” and “species” have no precise meaning.⁴⁴

Homology is the basis for inferring evolutionary relationships. Darwin and his colleagues regarded embryology as one of the strongest arguments for the general theory of evolution,⁴⁵ but discoveries in developmental genetics raise serious questions over how to interpret similar structures in different groups of species. The problems with the concept of homology raise doubts about its utility in inferring common ancestry.

Doubts About the Evolutionary “Tree of Life.” If all species are related by common ancestry, it should be possible to diagram their relationships in a “family tree.” This “evolutionary tree of life” is the “holy grail” of evolution and an enormous amount of effort has been expended in its pursuit. While many individual trees have been constructed, a single, universal tree has been an unexpectedly difficult task. Comparisons of different genes frequently give different patterns of relationships, raising questions about our ability to produce a reliable evolutionary tree. Biologist Michael Lynch, Indiana University, has written on this topic:

Clarification of the phylogenetic relationships of the major animal phyla has been an elusive problem, with analyses based on different genes and even different analyses based on the same genes yielding a diversity of phylogenetic trees.⁴⁶

Some resolution has been obtained by selecting sets of characters that produce mutually consistent

phylogenies, but this comes at the cost of discarding the inconsistent data.

Other scientists have wondered if conflicts among different phylogenetic studies might imply separate ancestry. Differences in the fundamental organization of cells have led to establishment of three separate “domains” of life: the Archaea, Eubacteria and Eukaryota. This might suggest at least three separate origins for life, as noted by microbiologist Carl Woese, University of Illinois at Urbana-Champaign:

Extant life on Earth is descended not from one, but from three distinctly different cell types. However, the designs of the three have developed and matured, in a communal fashion, along with those of many other designs that along the way became extinct.⁴⁷

According to Malcolm Gordon, the evolutionary tree is a net rather than a root, appearing to have had many origins: “The base of the universal tree of life appears not to have been a single root, but was instead a network of inextricably intertwined multiple branches deriving from many, perhaps 100 or more, genetic sources.”⁴⁸

Conceptually, it is only a short step from a “phylogenetic net” to numerous independent lineages. The way is blocked only by naturalistic philosophy. The pattern of relationships among living species may best be represented as a “forest” of independent lineages rather than a single “evolutionary tree of life.”

4. Questions About Natural Selection as Capable of Creating Morphological Novelty

Despite wide acceptance of the importance of natural selection, many scholars still are skeptical of its ability to produce the diversity of life. At least three biological problems can be identified: the problem of suitable mutations, the power of selection to create novelty and the problem of stasis.

Doubts About the Availability of Suitable Mutations. While no one doubts that populations vary in their genes, and that different forms of an enzyme may differ in their chemical efficiency, it is not at all clear that mutations provide suitable genetic bases for producing the major morphological changes required by evolutionary theory. Ecologist A. D. Bradshaw, University of Liverpool, noted:

Most species are very stable, and in situations where evolution is observed in one species often none is found in others despite equivalent opportunity. Evolutionary failure is commonplace. Despite the occurrence of high levels of protein polymorphism, there is good evidence that the supply of variation making a major contribution to fitness is very limited. As a result it is argued that lack of evolution in most species may be due more to lack of appropriate variability than to other causes: a condition for which the term “genostasis” is proposed.⁴⁹

As noted by evolutionary biologist Jeffrey Levinton, State University of New York at Stony Brook, major mutations seem ineffective in producing major viable changes, as they would likely disrupt the existing finely tuned genetic system:

As a general rule, major developmental mutants give a picture of hopeless monsters, rather than hopeful change. Epigenetic and genetic pleiotropy [a single factor

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has many different effects] both impart great burden to any major developmental perturbation. Thus it is unlikely that mutants affecting any fundamental prepattern in development are likely to produce a functional organism. . . . The cyclops mutant of *Artemia* is lethal. The homeotic mutants [produced by mutations of genes controlling development] of *Drosophila melanogaster* suffer similar fates.⁵⁰

Doubts About the Creative Ability of Selection. The effectiveness of natural selection seems to be limited to modifying existing structures, most commonly by affecting the size of body parts or the color of the integument. Experiments with selection invariably reach limits of change without producing new structures.⁵¹ Typically, the viability of the experimental line declines as the effects of selection accumulate.⁵² Selection has never been observed to produce any morphological novelty. Geneticist Mae-Wan Ho, formerly of the Open University, and mathematician Peter Saunders, King's College, London, argue that natural selection does not produce new morphological structures:

We argue that the basic neo-Darwinian framework – the natural selection of random mutations – is insufficient to account for evolution. The role of natural selection is itself limited: it cannot adequately explain the diversity of populations or of species; nor can it account for the origin of new species or for most evolutionary change. The evidence suggests on the one hand that most genetic changes are irrelevant to evolution; and on the other, that a relative *lack* of natural selection may be the prerequisite for major evolutionary advance.⁵³

Ho and Saunders further question the ability of neo-Darwinian theory to explain biodiversity:

It is now approximately half a century since the neo-Darwinian synthesis was formulated. A great deal of research has been carried on within the paradigm it defines. Yet the successes of the theory are limited to the interpretation of the minutiae of evolution, such as the adaptive change in coloration of moths; while it has remarkably little to say on the questions which interest us most, such as how there came to be moths in the first place.⁵⁴

Some scientists suspect that the instructions for constructing an organism are not exclusively located in the DNA. H. F. Nijhout, a biologist at Duke University, wrote:

On the other hand, genomes appear to contain nothing corresponding to the blueprint or recipe that is supposed to guide the physical construction of cells and organisms. In fact, the physiological procedures by which cells are built and rebuilt are only remotely connected with the genes. . . . [E]very cell provides the templet upon which the daughter cell organizes itself. Many functions of that templet are performed at the level of genes and their immediate products, but the genetic instructions are supplemented by “cellular heredity,” often carried in the cell’s physical structure. Such heredity is commonly designed “epigenetic.”⁵⁵

Possible aspects of cellular structure that might play a role in form-building include the cytoskeleton and the cell membrane.

The problem is much greater if the major features of evolution are condensed into a relatively short time interval such as the Cambrian explosion.⁵⁶

Natural Selection and the Problem of Stasis in the Fossil Record. The fossil record presents some difficult challenges for Darwin's theory, as described by Joel Cracraft, ornithology department of the American Museum of Natural History:

Indeed, the "factual information" that Darwin presents (there was virtually none) seems to support a philosophical (and scientific) viewpoint opposite to that of his own. Darwin was the consummate theorist, a scientist of the highest stature who did not let data stand in the way of his ideas.⁵⁷

The fossil record, seemingly so important for anyone advocating evolutionary modification through time, was not very kind to Darwin's cause. As a result, he ignored it; the fossil record certainly did not make him alter his theorizations or expectations. In fact, what he often saw was stasis.⁵⁸

Paleontologist Niles Eldredge, invertebrate paleontology department of the American Museum of Natural History, noted that paleontologists commonly do not see the patterns of fossil change predicted by Darwin's gradualistic theory:

No wonder paleontologists shied away from evolution for so long. It seems never to happen. Assiduous collecting of cliff faces yields zigzags, minor oscillations, and the very occasional slight accumulation of change – over millions of years, at a rate too slow to really account for all the prodigious change that has occurred in evolutionary history. When we do see the introduction of evolutionary novelty, it usually shows up with a bang and often with no firm evidence that the organisms did not evolve elsewhere! Evolution cannot forever be going on someplace else. Yet that's how the fossil record has struck many a forlorn paleontologist looking to learn something about evolution.⁵⁹

Natural selection provides a reasonable explanation for why individuals vary within a population, and for the existence of a group of similar species occupying different habitats. It does not explain the origins of morphological structures, body plans or molecular complexities. Something more is needed.

A common response to doubts over the effectiveness of natural selection is to propose some other force acting to cause changes in species. The most popular alternative is that evolution is not left to chance, but that God is somehow involved in guiding the evolutionary process. We will briefly examine that idea in the next section.

5. Doubts About Providence in the Process of Evolution

Various forms of theistic evolution propose that descent with modification is the process God chose to use to create the diversity of life, including humans. Many seem to think they are combining science with the Bible by adopting one of the theories of theistic evolution. This is a false hope. Despite popularized claims, any notion of supernatural activity in nature is incompatible with Darwinism, or with science as it is usually defined.⁶⁰ Darwin emphatically rejected any appeal to divine guidance in evolution:

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I entirely reject, as in my judgment quite unnecessary, any subsequent addition “of new power and attributes and forces”; or of any “principle of improvement,” except in so far as every character which is naturally selected or preserved is in some way an advantage or improvement, otherwise it would not have been selected. If I were convinced that I required such additions to the theory of natural selection, I would reject it as rubbish. . . . I would give nothing for the theory of Natural selection, if it requires miraculous additions at any one stage of descent.⁶¹

Atheist biologist Jerry Coyne emphasizes the impossibility of combining faith in the biblical God and Darwinian evolution:

True, there are religious scientists and Darwinian churchgoers. But this does not mean that faith and science are compatible, except in the trivial sense that both attitudes can be simultaneously embraced by a single human mind. (It is like saying that marriage and adultery are compatible because some married people are adulterers.)⁶²

Coyne adds:

This disharmony is a dirty little secret in scientific circles. It is in our personal and professional interest to proclaim that science and religion are perfectly harmonious. After all, we want our grants funded by the government, and our schoolchildren exposed to real science instead of creationism. Liberal religious people have been important allies in our struggle against creationism, and it is not pleasant to alienate them by declaring how we feel. This is why, as a tactical matter, groups such as the National Academy of Sciences claim that religion and science do not conflict. But their main evidence – the existence of religious scientists – is wearing thin as scientists grow ever more vociferous about their lack of faith.⁶³

The evolutionary scenario is permeated with features that Christians regard as untrue and unproven. Adding theism to evolutionary theory, as in all theistic evolutionary theories, inevitably makes God the god of evil. David Hull, a prominent evolutionary philosopher, Indiana and Northwestern Universities, pointed out the implications of theistic evolution for the problem of evil and suffering:

What kind of God can one infer from the sort of phenomena epitomized by the species on Darwin’s Galapagos Islands? The evolutionary process is rife with happenstance, contingency, incredible waste, death, pain and horror. . . .

Whatever the God implied by evolutionary theory and the data of natural history may be like, He is not the Protestant God of waste not, want not. He is also not a loving God who cares about His productions. He is not even the awful God portrayed in the book of Job. The God of the Galapagos is careless, wasteful, indifferent, almost diabolical. He is certainly not the sort of God to whom anyone would be inclined to pray.⁶⁴

Christians who want to combine evolutionary theory and some notion of a god who acts in nature should avoid claiming they are combining God and Darwin. What they are doing is substituting some

supernatural activity in place of the neo-Darwinian processes of mutation and natural selection. In the process they are substituting God in the place of Satan as the cause of evil.

Evolutionary biologist Kenneth Miller, Brown University, denounced any appeal to a God who is actively guiding events in nature:

Intelligent design [any theory that God is repeatedly affecting the course of nature] does a terrible disservice to God by casting him as a magician who periodically creates and creates and then creates again throughout the geologic ages. Those who believe that the sole purpose of the Creator was the production of the human species must answer a simple question – not because I have asked it, but because it is demanded by natural history itself. Why did this magician, in order to produce the contemporary world, find it necessary to create and destroy creatures, habitats, and ecosystems millions of times over?⁶⁵

Physicist Steven Weinberg, 1979 Nobel Prize-winner in Physics, wrote:

Although I understand pretty well how brightly colored feathers evolved out of a competition for mates, it is almost irresistible to imagine that all this beauty was somehow laid on for our benefit. But the God of bird and trees would have to be also the God of birth defects and cancer.⁶⁶

Proposing that God is somehow guiding evolution does not resolve the problems of general evolutionary theory. It only adds these problems to the theological problems of theistic evolution. It makes many people feel better to include God, but the kind of God implied by evolutionary theory is not the God of the Bible. Such a “god” makes very little difference to the dominance of philosophical naturalism in science, but becomes the cause of evil in the form of suffering, genetic defects, violence and the dominance of the strong over the weak. Such a “god” is not only scientifically useless – it is philosophically and sociologically undesirable.

Conclusions

Modern science is dominated by naturalistic philosophy, which rules out any divine activity. As such, abiogenesis and natural selection (or something similar) are the only options available for explaining the origins of biodiversity. These two ideas persist, not because they have been scientifically tested and shown to be reasonable, but because of a distaste for anything supernatural. The statements quoted here, mostly from well-informed and committed evolutionary scientists show that abiogenesis and natural selection are widely seen as unsatisfactory attempts to explain the presence and diversity of life, respectively.

Distaste for the supernaturalism inherent in special creation may be a factor in the insistence that evolution has to be true. Biologist D. M. S. Watson, University College, London, wrote:

The extreme difficulty of obtaining the necessary data for any quantitative estimation of the efficiency of natural selection makes it seem probable that this theory will be re-established, if it be so, by the collapse of alternative explanations which are more easily attacked by observation and experiment. If so, it will present a parallel to the theory of evolution itself, a theory universally accepted not because it can be proved

by logically coherent evidence to be true but because the only alternative, special creation, is clearly incredible.⁶⁷

Perhaps the time has come to remind the scientific world of special creation. The contemporary naturalistic picture of the world, which excludes divine activity before even examining the evidence, is a failure. One can wonder how different our picture of nature would be if it were reframed with the liberating knowledge of a Creator God whose eternal power and creative nature can be seen in the things he has made.

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claim that defining science in this way is a philosophically based decision, not a logically necessary choice.

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Chapter 15

THE GENESIS FLOOD AND THE GEOLOGICAL RECORD

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One of the most astonishing events in the early history of mankind was the Genesis Flood. While the book of Genesis devotes two chapters to the Creation account, three chapters describe an ominous flood that devastated the whole earth. Such a flood would be expected to leave a major imprint in the rock layers of the earth – and it does. The Flood therefore lies at the epicenter of what is probably humanity’s greatest intellectual battle: the enduring conflict between science’s evolutionary model and the biblical account of Creation.

The biblical and scientific models of origins could hardly be more different. The Bible indicates that just a few thousand years ago, God prepared the earth and created various forms of life in a six-day Creation week. Later mankind became “only evil continually”¹ and this “grieved” God (Gen 6:5-6) who sent a worldwide Flood, which destroyed the entire creation, including human beings. Only those humans who had remained faithful to him were saved in a huge ark along with representative terrestrial animal types. In contrast, the present scientific view is that life originated by itself some 3.5 plus billion years ago, and that it gradually evolved into more and more advanced forms through a natural selection process that eventually produced man. No God was involved. Which of these two opposing accounts is correct? They cannot both be true.

The biblical account is today widely dismissed as “unscientific,” that is, it is unsupported by observable data. Creation is rejected, even scorned, by most scholars and by many ordinary people who have been conditioned to believe implicitly in current scientific methodology. However, much of the geological and geophysical data that is found across the world can be satisfactorily explained in terms of the Creation account *and* the biblical Flood record together, and in some instances better so explained than by the evolutionary model. It is therefore important to understand the data from this perspective and not allow unwarranted scientific conclusions and suppositions to shape our understanding.

Unfortunately, when it comes to questions of origins and beginnings we are dealing with past events that we cannot now observe, and some caution is warranted. Since the two models presented above are very different from each other a lot of scientific data can provide relevant inferences. The purpose of this chapter is to consider some of these inferences and examine available data in the light of the Genesis account, showing how much of that data supports the biblical record when evaluated objectively.

Relationship of the Genesis Flood to the Rock Layers and Their Fossils

When we study the rock layers of the earth, a few striking facts soon become apparent. Fossils that represent past life are almost exclusively found in sedimentary rocks, hence these types of rocks are of special interest to the history of life. Sedimentary rocks come from clay, sand and up to boulder size sediments, and are usually transported by water and later become cemented as sedimentary rocks. They tend to occur as many flat layers often laid down in a horizontal pattern. They can later be bent and even folded by movements of the continents and may not now be horizontal.

The fossil record indicates other striking facts. The various kinds of fossils do not appear all mixed together (figure 1), but show somewhat of a consistent sequence up through the layers at various localities. The vertical sequence of the rock layers and their fossils is called the geologic column. While a number of creationists point out that in some places like the Alps or the Rocky Mountains the geologic column (sequence) is out of order, we need to keep in mind that these exceptions are in disturbed areas where there is evidence that older layers have been thrust over younger ones. In undisturbed areas a general sequence seems to follow, with microscopic organisms in the lowest layers, marine organisms further up and more advanced organisms still higher.

The Genesis Flood is the great event that reconciles a six-day Creation week to the geologic column. In general, most of the column that has abundant large fossil organisms may be considered to have been laid down by that flood. This part is called the Phanerozoic (see figure 1). Under normal quiet conditions, which might be expected to have prevailed before and after the Flood, sediments are laid down on average at the rate of only a few centimeters in a thousand years, so we would not expect much sediment to be deposited during the quiet conditions either before or after the Flood. Within a biblical time frame, a major flood seems essential to account for the huge thick sequences of sediments and their fossils that we find on all continents.

The significance of the Genesis Flood to the Creation week account becomes apparent when one becomes familiar with the sequence of the fossil record. Unless most of that fossil record was formed during the Flood, an all-inclusive six-day Creation seems out of the question. This is because different kinds of fossils occur at different levels. For instance we find dinosaurs above the crablike trilobites (figure 1). If the geologic column represents billions of years, as assumed for evolution, then God did not create the different kinds of organisms we find at different levels in a six-day all-inclusive Creation week as indicated in Genesis 1. God also stated that he created everything in “six days” when at Mount Sinai he gave the Ten Commandments (Exod 20:11; 31:17).

Some Alternative Concepts

1. The Flood is sometimes interpreted to have been a recent local event in Mesopotamia. This permits some accommodation of the biblical Flood account to the billions of years of evolutionary development that are assumed to have occurred earlier. However, there are problems with the local Flood theory: (a) The Genesis account repeatedly emphasizes a worldwide event, using such inclusive comments as “all the high hills under the whole heaven were covered” and “all flesh died that moved upon the earth” (Gen 7:19, 21). (b) Why would God ask Noah to build a huge ark to preserve a variety of animals if the Flood was only local? We would expect the animals to have been widely distributed, and hence a local flood would not destroy all the various species. (c) After the Flood, God promised not to destroy the world again by this method (Gen 9:11-15; Isa 54:9). There

have been many local floods since the Genesis Flood so it does not appear that a local flood is what God had in mind.

2. Some suggest that God was involved in a long evolutionary process for the development of advanced life-forms over billions of years. This is the ill-conceived “theistic evolution” model, discussed in chapter 16 and elsewhere in this book. Problems with this idea are (a) The fossil record does not favor such a model because of the gaps between major groups (see below). (b) The model demeans the God revealed in the Bible. Here he uses the crutch of evolution to produce advanced life-forms. The slow progress and the competition implied in an evolutionary process challenge God’s creative power, knowledge and goodness. The evolutionary process of survival of the fittest through competition and death of the weak seems out of character with the God who has concern for the sinner (Isa 44:21-22) and who does not forget even the sparrow (Luke 12:6). One can postulate a god for theistic evolution, but it would not be the biblical God.

3. A model that tries to preserve long geological ages for the development of life as well as God’s creatorship is the “progressive creation” model. Here God performs multiple Creation events over billions of years. The moderate degree of progression found in the fossil record reflects successively advancing creative acts, hence the designation “progressive creation.” This model fits well with the gaps we find in the fossil record because God creates the various forms of life – they don’t necessarily evolve. However, there are also major problems with this model: (a) It disallows that God created all “in six days.” (b) God’s creation is described as “very good” (Gen 1:31). Yet in the fossil record we find evidence of rampant predation with predators such as *Tyrannosaurus rex* and other carnivorous animals. All is not “very good” when we consider the fossil record. A direct reading of the Bible seems to indicate that there was a “good” creation some few thousand years ago, that man sinned and that subsequently there was degeneration (Gen 3:14-19; Rom 5:12-19, 22). A worldwide flood then followed that would be responsible for most of the fossil deposits. However, if long periods of time are injected into the fossil record, as in the progressive creation model, we face the logical incongruity of the effects of sin long before man was created, since predatory animals would have existed millions of years earlier. (c) Likewise, as we ascend through the fossil record we find six or more major extinctions of large numbers of fossil species that do not reappear later. The disappearance of the dinosaurs at the top of the Mesozoic era (figure 1) is one of the better known extinctions. Would an intelligent God progressively create many thousands of advanced types of organisms only to have them disappear again relatively soon during major extinction events? A worldwide flood that destroyed different ecological populations seems a better explanation for these mass extinctions. (d) It also seems somewhat bizarre for God to wait for millions of years between episodes of creation.

Various Flood Models

The biblical Flood account does not give many geological or paleontological details. We do know that the Flood event took a little over a year and that all the earth was covered with water that then receded. The Bible states that as the Flood began “the fountains of the great deep [were] broken up, and the windows of heaven were opened” (Gen 7:11). However, we have few clues as to what geophysical factors might have brought on this momentous catastrophe. Many geological changes can be postulated to have occurred during the year of the Flood and many adjustments such

as uplift, subsidence and drifting of the continents could be expected to have occurred. Earthquakes that adjust tensions in the earth would have been common and would likely continue long after the Flood had ended, even to our time.

Several Flood models have been suggested, including (a) *the sinking of the continents* model proposes that the oceans that existed before the Flood inundated the earth as they transferred marine sediments over subsiding continents. Earth's topography was less pronounced then compared to the present, and there would have been plenty of water to cover the earth. It has been calculated that if the earth were a perfectly smooth sphere, the present volume of the oceans would cover it to a depth of 2.44 kilometers. Towards the end of the Flood year, and after that, the continents would have risen, moved and been compressed, forming major mountain ranges. The rising of the continents at the end of the Flood may have been facilitated by the fact that our granitic continents have a lower density than the deeper rocks below. On an earth size scale those continents would have literally floated up above the heavier deep rocks. (b) *The exchange of the continents with the oceans* model proposes that the present continents were the seas before the Flood and vice versa. During the Flood major transfer of sediments from the pre-Flood continents to the pre-Flood seas occurred. These changes were accompanied by major geochemical changes and/or collapse of extensive pre-Flood continent aquifers. (c) *The contracting and expanding earth* model derives in part from a persistent contemporary secular scientific hypothesis that the earth was smaller in the past² having only three-fifths the diameter of the present earth. A fairly simple and elegant suggestion is that the Flood was brought on by the contraction of the earth, allowing the seas to cover the continents. Subsequent expansion restored dry continents as the waters returned to the oceans.

It needs to be kept in perspective that these are only suggestions, and that each model has problems and advantages. Other models have been postulated and the real Flood could have involved aspects of all three proposals above and more. What these models indicate is that from a scientific perspective a worldwide flood is clearly feasible.

The Trend Towards Catastrophism

"Catastrophism" is the idea that major rapid catastrophes have played a major role in shaping the features of earth's crust. The Genesis Flood is a prime example. In contrast, the opposite view called "uniformitarianism" suggests that what has been geologically important in the past is that small, slow changes have continued over eons of time and that catastrophes are insignificant. Catastrophism fits better with the biblical account of beginnings, while uniformitarianism accommodates better the long geological ages of evolutionary history over billions of years. While up until about two centuries ago catastrophism was the dominant view, the gradual adoption of strict uniformitarianism followed as evolutionary theory became accepted. Catastrophes such as the Genesis Flood were consequently denigrated and rejected.

However, during the latter part of the twentieth century continuing study of the rocks themselves, especially sedimentary rocks, indicated that major catastrophes had occurred. It was recognized that there had been widespread catastrophic transport of major rocky deposits and also evidence of rapid erosion. Then questions arose about the disappearance of all the dinosaurs at about the same time. All this did not fit with uniformitarianism, and a major shift in geological thinking followed. The paleontologist Erle Kauffmann comments on the change: "It is a great philosophical breakthrough

for geologists to accept catastrophe as a normal part of earth history.”³ In summarizing a review of the study of sediments, geologist Dag Nummedal stated: “The profound role of major storms throughout geologic history is becoming increasingly recognized.”⁴ The year of the Flood might be expected to have included many “major storms.” The growing awareness of catastrophism is illustrated in the title of Darek Ager’s book *The New Catastrophism: The Importance of the Rare Event in Geological History* (1993).

In fairness it should be pointed out that in returning to catastrophism, the majority of geologists do not accept the biblical Flood as the major cause for depositing most of the sediments on the earth. They admit major catastrophes, but with eons of time between them hence preserving the long geologic ages. However, many of the new catastrophic interpretations of geological events tend to fit well with the Flood account.

The reversals of the scientific ethos from catastrophism to uniformitarianism and back to catastrophism reflect on both the tentativeness of scientific conclusions and the sociology of a scientific community that collectively too often defends such tentative conclusions as objective reality. One also needs to keep in perspective that as we look at the earth year after year, usually seeing very little change on a worldwide scale, it is not difficult to think that there is some validity to uniformitarianism. Many are impressed with the normal stability of the earth. In fact, the Genesis Flood is the only universal catastrophe mentioned in the Bible, apart from the final destruction and re-creation of the earth at the end time, of which the Flood is a specific type. However, major earthquakes and tsunamis remind us that things can also change very rapidly and dramatically.

Geological Evidence for the Genesis Flood

There is a strong bias in the scientific literature and in textbooks against any suggestion that God is or has been operative in nature, or that the Bible and the Genesis Flood are true. For well over a century God has been expelled from science, and simple materialism (mechanism, naturalism) is now the rule. In the words of Harvard University’s biologist Richard Lewontin: “Materialism is absolute, for we cannot allow a Divine Foot in the door.”⁵ Nevertheless in spite of this rejection, when we look at nature itself and the *data* (not secular interpretations) in the scientific literature we find a significant body of evidence that favors the catastrophic Genesis Flood rather than billions of years of slow gradual sedimentation and evolution. A number of examples follow, which demand objective consideration.⁶

1. Widespread Sedimentary Deposits. A worldwide flood, because of its huge size, would be expected to leave more widespread sedimentary deposits than a local flood, and there are many examples that this is so. Geologists tend to divide sedimentary rock layers into large unique units called formations. Each formation has some characteristic rocks or other features that separate it from the formations above and below. The extent of many of these *unique* widespread formations suggests activity on a scale totally out of character with “quiet” or local catastrophic events. Figure 2 identifies five Mesozoic formations in the cliffs above Steinaker Reservoir in northern Utah, U.S.A. One can see these formations over widespread regions wherever erosion exposes them. From top to bottom, the areas of these formations in square kilometers are Frontier, 300,000; Mowry, 250,000; Dakota, 815,000; Cedar Mountain and attached similar Burrow Canyon, 130,000; Morrison, 1,000,000. On a more familiar scale, the Dakota Formation is found in at least eleven states, and the

Morrison extends from the southern United States into Canada. This represents semicontinent-wide deposition of the unique sediments characteristic of each formation, which is much more widespread than deposition presently caused by local floods.

It is difficult to appreciate the thinness and breadth of some of these formations. For instance, underneath some of those mentioned above, we find the Shinarump Conglomerate, which is almost continuous over nearly 250,000 square kilometers. This conglomerate, which occasionally grades into a coarse sandstone, usually has a thickness of less than thirty meters. If its area were represented by an ordinary sheet of paper, proportionally its thickness would average only about one-fourth that of the paper. Geologists normally attribute the Shinarump to river activity, but what kind of river would spread coarse sand and pebbles over such a widespread area in such a very flat thin layer? This seems more like the effect of rampant sheet flood activity by rapidly spreading water. Geologist Derek Ager, who does not endorse the Flood, refers to a thin layer "about a meter thick" that "can be found all around the Alpine Chain"⁷ of Europe. A thin shale layer just a few centimeters thick is spread over one thousand square kilometers as a "parting" in the midst of a coal seam.⁸ In referring to the sedimentary strata, the paleontologist Carlton Brett, who believes in long geologic ages, comments: "The accumulation of the permanent stratigraphic record [the sedimentary layers] in many cases involves processes that have not been, or could not be observed in modern environments . . . there are the extreme events . . . with magnitudes so large and devastating that they have not been, and probably could not, be observed scientifically."⁹

As one considers these incredibly widespread layers, it also needs be kept in mind that it would not be possible to spread the unique thin continuous semicontinent-wide layers that we often find in the past sedimentary record on our present earth because the present topography is so irregular. Our continents are rich with valleys, hills, canyons and mountains. How would it be possible to spread out such layers, unless there is a huge, nearly flat plain to start out with? Furthermore, in a normal slow deposition model, just one major river channel traversing such huge areas would inhibit the spread of any new layer over the entire area. We are dealing here with a very different past that seems to fit better with what we might expect from a catastrophic flood, than from usual conditions known today.

2. Widespread Fossil Distribution. Biologists examining the distribution pattern of organisms over the surface of the earth, sometimes combine them into ecological provinces or other groupings where the variety of species found tends to be different from other provinces. For instance, a desert environment can have several provinces depending on temperature, moisture, and so on. When one looks at the distribution of fossils, one finds that the various provinces are notoriously more widespread in the fossil record than at present. Several researchers have noted this. Speaking of plants, one paleontologist refers to "the extraordinary cosmopolitan distribution of many ancient groups."¹⁰ This more widespread pattern seems to be in harmony with the more widespread sedimentary deposits mentioned above, that may be derived from extensive lateral flood transport. Paleontologists often attribute the unusually widespread distribution of organisms in especially the Paleozoic and Mesozoic deposits to a significantly different climate in the past. The Bible also indirectly implies that the climate was different before the Flood since it appears that there was no rain then (Gen 2:5). In the biblical model, the majority of fossils would come from organisms living just before the Flood. The extended fossil distribution, whether caused by climate and/or

widespread flood transport, is more akin to what would be expected from the biblical model than from evolutionary and uniformitarian interpretations, where the past is not assumed to be very different from the present.

3. *Abundant Underwater Activity on the Continents.* By studying the details of sedimentary layers it is possible to discover something about the conditions under which they were formed, and a lot of evidence exists in the form of turbidites for the underwater activity that would be expected during the Flood. Turbidites are a special kind of rapid sedimentary deposit that leaves a characteristic complex of layers as the sediments slow down to their final resting locality. Turbidites, and other closely related deposits, are only formed underwater as a dense current of loose sediments flows down into deeper basins. The currents can flow at one hundred kilometers per hour and deposit widespread layers as much as two hundred meters thick, although most are much thinner. In 1929, a modern turbidite in the North Atlantic spread over one hundred thousand square kilometers covering up some of the debris from the Titanic. Turbidites reflect the kind of sedimentary activity that would be expected during the Flood.

One turbidite does not prove that the Flood occurred, but their abundance in sedimentary layers on the continents speaks strongly of extensive underwater activity. Geology did not discover turbidites and other similarly formed deposits until the middle of the last century, but just two decades later it could be stated that “tens of thousands of graded beds stacked on top of one another have been interpreted as turbidity current deposits”¹¹ (*i.e.*, turbidites). Turbidites are often found in larger sedimentary units known as submarine fans that are abundant on the continents and likewise only form underwater.

4. *Abundant Ocean Sediments on the Continents.* One can easily tell if a sedimentary layer came from the ocean by looking at the fossils and minerals it contains. Marine organisms, like corals or starfishes, indicate that the sediments originated in the oceans; organisms typical of land life, like lilies or grasshoppers, indicate they originated on the continents. Sometimes the two kinds are mixed. The lower density of Earth’s granitic continents keeps them above sea level. However, as we trek over the continents we find an unusual amount of fossils and sediments that originated from the ocean, including those found on Mount Everest! Strangely, the thickness of these marine sediments on the continents is about twice that of those now found on the floor of the oceans. We would expect marine fossils to be deposited in the oceans, not on the continents. The geologist J. S. Shelton points out the dilemma:

Marine sedimentary rocks are far more common and widespread on land today than all other kinds of sedimentary rocks combined. This is one of those simple facts that fairly cry out for explanation and that lie at the heart of man’s continuing effort to understand more fully the changing geography of the geologic past.¹²

This fact does not cry out for an explanation if one accepts the biblical Flood, especially those models where the waters from the oceans inundated the continents and carried a lot of marine sediments onto the land.

Geologists who reject the Flood explain the abundance of deposits from the ocean now found on the continents by proposing that for much of the distant past the oceans were higher than now, and that the continents were then much flatter. In this way the oceans and seas covered the continents.

However, in making this suggestion, except for time differences, they are inadvertently arguing for activity that closely resembles that of a Flood!

5. *Evidence of Continental-scale Currents.* By studying a variety of features in sedimentary layers such as the orientation of elongated grains or size distribution patterns, one can tell in which direction the water that deposited the sediments was flowing. At present on our continents, streams and rivers carry sediments in virtually all directions. When one looks at the direction of flow for many thousands of sediments in the Paleozoic and Mesozoic deposits of North America, one finds a dominant continent-wide southwest direction of flow for the lower portion, with a gradual change toward the east higher up,¹³ and with little apparent topographic influence. This strengthens the interpretation that a single flood with a major flow direction was responsible, as might be expected during a worldwide flood. Dominant orientation is not noted for the Cenozoic (upper part) of the geologic column, and this may reflect the many directions of flow that might be expected as the Flood waters receded from the continents.

6. *Survival of "Ancient" Surfaces.* When we examine the surface of our continents we occasionally find moderately widespread flat surfaces that, according to standard geologic time, are considered to be many millions of years old. Yet these surfaces do not seem to show evidence of the changes expected over those vast ages, and do not seem to have ever had other layers over them protecting them from the ravages of millions of years of weathering. This data fits better with a biblical model of a past history of just a few thousand years. An example is Kangaroo Island, off the south coast of Australia, that is almost all extremely flat and covers over four thousand square kilometers. Based on radiometric and fossil dating, this surface is considered to be around 160 million years old. However, there is a problem with this view. The average present rate of erosion of the continents of the world is about sixty millimeters per thousand years. How could the surface of Kangaroo Island ever survive for 160 million years, since we would expect (correcting for the present effects of agriculture) around five kilometers of vertical erosion in that time? Also, erosion tends to create great irregularities as streams and rivers cut deeper, yet Kangaroo Island remains very flat. In referring to such flat surfaces, the noted geomorphologist C. R. Twidale comments: "There has surely been ample time for the very ancient features preserved in the present landscape to have been eradicated several times over. . . The survival of these paleoforms is in some degree an embarrassment to all of the commonly accepted models of landscape development."¹⁴ There is no embarrassment if one follows the biblical Creation and Flood model, since Kangaroo Island is not as old as evolutionary geology proposes.

7. *The "Flat Gaps" in the Sedimentary Layers (Paraconformities).* These gaps provide rather convincing evidence for the Genesis Flood. An observer looking at the many sedimentary layers over the earth is likely to be unaware that between some of those layers there are gaps where parts of the geologic column are missing. Since there are no rocks representing the gap, they can be hard to identify. There are many small gaps between sedimentary layers, but if a gap is large, and if the layers above and below the gap are flat, geologists use the term "paraconformity" (sometimes "disconformity" or "nonsequence") to designate the absence of part of the geologic column. Two important characteristics need to be kept in mind in determining a paraconformity: (a) a major gap and (b) the flatness of the layers below and above the gap, which results in a flat contact surface between the two. Simply put, these are "flat gaps." A *flat gap* is usually identified by comparing the

fossils, rocks, dating and so on, found in the layers above and below the gap with the pattern of the standard geologic column as found elsewhere in the earth. The assumed length of time (duration) of the gap is determined using the standard geologic time assumed for the missing portion. The usual explanation for these gaps is that these were upland areas where there would have been no sediment deposition, rather than basins where sediments accumulate. If accumulation takes place, there is no gap.

The problem the flat gaps pose is similar to the one mentioned above for Kangaroo Island, that is, where is the evidence for irregular erosion and other evidence for long ages of time expected in the layer(s) below the flat gap? If these layers were exposed for the millions of years inferred from the geologic time scale, erosion would eliminate the flatness of the gaps and a lot of the sedimentary layers below, and so there should be no paraconformities. The flatness of the flat gaps is in sharp contrast to the present common irregular topography of our continents.¹⁵ Flat gaps challenge the long geologic ages and related factors such as radiometric dating. These paraconformities often cover major parts of continents and are common over the earth.¹⁶

Three flat gaps are illustrated in figure 3 of the Paleozoic layers in the Grand Canyon of the Colorado River. The gaps are the lines at the tips of the arrows. Note the flatness of the layers. The top arrow represents a six million year gap, the middle arrow fourteen million years and the bottom arrow one hundred million years. Based on average world rates of erosion (corrected for the effects of agriculture) over the times envisioned by the long geologic ages, one would expect 180 meters, 420 meters, and 3000 meters of erosion respectively at these gaps. The Grand Canyon is only around 1500 meters deep! For those familiar with the geologic column, both the Ordovician and Silurian eras are missing at the lowest arrow. In referring to this gap, a geologist who specializes in the Grand Canyon states: "Here the unconformity [gap, paraconformity] even though representing more than 100 million years can be difficult to locate."¹⁷ Another flat gap of around twenty million years lies between the Cedar Mountain and Morrison Formations illustrated in figure 2. The extreme scarcity of erosion at these flat gaps is just what one would expect from relatively rapid sediment deposition during a flood of biblical proportions, but not at all what would be expected over the millions of years proposed for the geologic time scale.

8. *Incomplete Ecological Systems.* Almost all animals derive their energy either directly or indirectly from plants that in turn derive their energy from the sun. Without energy animals die. In several parts of the fossil record, that are postulated to represent millions of years of evolutionary development time, we find the animals but very few or no plants to provide the energy that the animals require. The fossils in these layers do not represent long-term viable ecological systems capable of supporting life over the long ages postulated. The Coconino Sandstone of the southwestern United States represents an incomplete ecological system. It is the light colored layer just above the tip of the top arrow in figure 3. One finds many hundreds of very good animal trackways in the Coconino Formation, especially in the lower half, which were probably produced by amphibians or reptiles. However, no plants have been found. What did these animals eat during the millions of years postulated for the Coconino? Incidentally, the trackways are almost all going uphill. Could they be from animals escaping rising flood waters?

Paleontologists report a similar situation for the *Protoceratops* dinosaur found in the central Gobi Desert of Mongolia. They state, "The abundance of an unambiguous herbivore (*Protoceratops*) and a rich trace fossil fauna [probably tubes made by insects] reflect a region of high productivity

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[of energy by plants]. The absence of evidence of well-developed plant colonization is, therefore, anomalous and baffling.”¹⁸ However, this is not so baffling in the context of the Flood.

The vast Morrison Formation (figure 2) has been one of the world’s richest sources for dinosaur fossils, yet it appears to be another incomplete ecological system. Plants are rare, especially in the vicinity of dinosaurs. Paleontologist Theodore White comments that “Although the Morrison plain was an area of reasonably rapid accumulation of sediment, identifiable plant fossils are practically nonexistent.”¹⁹ These vast incomplete ecological systems might well represent Flood deposits. Moving waters could sort animals from plants, the latter forming our extensive coal deposits.

Flood Legends

One can disregard all the evidence for the Flood from the Bible and the sedimentary rocks, yet Flood accounts from the folk literature of the world still provide compelling evidence that there was a worldwide flood. Table 1, which is based on Stith Thompson’s monumental six-volume treatise on folk literature,²⁰ references six times as many accounts of a worldwide flood than any other cause of past world calamities.

Table 1	
References to World Calamities in Folk Literature (Exclusive of end-of-world calamities. Based on Thompson, 1955)	
CAUSES	NUMBER OF REFERENCES
Deluge (worldwide flood)	122
Fire	19
Continuous winter	6
Large stones	2
Ogre	1
Earthworm	1
Objects (dead and alive)	1
Sunrise	1

There are 122 references to a worldwide Flood, with the next closest cause being fire, with only nineteen references. It is sometimes suggested that these Flood legends could represent local floods because they took place before modern communication could facilitate evaluating the extent of these floods. This does not seem to be the case because if these calamities were local events spread over time, we would expect a greater variety and a much more even mix of kinds of causes. Note that drought, pestilence and earthquakes are not even mentioned in table 1. The most reasonable conclusion seems to be that, because there really was a worldwide Flood, there is a very strong dominance of flood legends in world folk literature.

The Fossil Sequence

Many scientists feel that the fossil record authenticates evolution because, as one ascends

up through the geologic column, fossils show a gradual increase in complexity. However, this conclusion is valid only in a general way. Figure 1 shows that simple microscopic organisms are in the lowest (oldest) layers and marine organisms just above them. Advanced organisms like mammals and humans are in the highest sections. A large group of organisms, many of which we are not so familiar, such as dinosaurs, are found in the middle regions of the geologic column. These are of more than passing interest in some Flood models.

Does the fossil record show a pattern of long, gradual evolution? Not at all. The Precambrian period at the bottom of figure 1 represents around three thousand million years, yet we find essentially no good evidence of advanced organisms for almost all of that entire period. In the Precambrian, we essentially find very rare microscopic one cell types of organisms, and they represent the first five-sixths of all evolutionary time! Then slightly above, in the Cambrian era, organisms representing most of the phyla (main divisions) of the animal kingdom appear in just 2 percent (fifty million years) of evolutionary time. Evolutionists recognize this sudden appearance and call it the Cambrian explosion (figure 1). There are other brief explosions higher up in the fossil record, such as those for modern birds and mammals. These relatively rapid explosions provide very little time for major evolutionary events, further reducing their likelihood.

Does the fossil record provide evidence for *continuity* of life from simple to complex? Not at all. This is controversial, because evolutionists often make pronouncements about the discovery of new missing links between fossil types that can suggest that the major problem of “missing links” is solved. Favorite areas for reporting intermediates have been between fish and amphibians, reptiles and mammals, or terrestrial mammals and whales – but these intermediates could equally well be different created organisms. These reports are usually of fairly closely related types and do not address the real problem of the origin of the major divisions of the animal and plant kingdoms. It is between these major groups such as sponges, clams, fish, mosses and flowering plants that one would expect the greatest number of intermediates, and this is precisely where they are notoriously absent. The sudden appearance of the major animal phyla in the Cambrian explosion is a double problem for evolution. Not only do most of the major animal phyla have to evolve in this relatively very brief period of evolutionary time, but they have to do so without leaving fossil intermediates. Millions of fossils have now been found and the more that are discovered the more sure we can be that the sample represents reality. Evolutionists do not seem to understand their problem. They don’t need just a few intermediates here and there. If evolution has really taken place, as organisms gradually tried to evolve from one major kind to another – with numerous detrimental or neutral mutations and extremely rare advantageous ones,²¹ – we should find a *solid continuity* of intermediates between major groups attempting to evolve. But they are just not there in the fossil record.

As one ascends through the geologic layers, does the sequence of fossils show advancement? Yes it does. This is as expected for evolution and is often presented as a major problem for the biblical model. However, there are other good explanations that fit within the biblical context. Since we do not have many details about the Flood, the suggestions given below should be read with caution.

Could the Flood and conditions in the world before that Flood be responsible for the fossil sequence? Some suggest that the fossil sequence is due to sorting of organisms by gravity. Gravity could provide some sorting, especially that of dead carcasses,²² since amphibians and reptiles do

not float as long as birds and mammals, and would sink first. It does not seem that gravity would be significant for heavy clams and corals, as sometimes suggested, because these can be quite abundant high in the fossil sequence.

Mobility of animals is sometimes suggested to explain the fossil sequence. This might account for the paucity of whale and bird fossils as they escaped burial,²³ but it is difficult to apply mobility to the whole fossil sequence.

Another suggestion is that there was a different distribution pattern of organisms before the Genesis Flood than at present. Called the ecological zonation theory, it proposes that the sequence of the fossil record reflects the ecological distribution of organisms before the Flood, especially their altitudinal (vertical) distribution. The fossils in the lower regions of the fossil record were from those organisms that lived in the lowest regions before the Flood, and so on. As the Flood waters gradually rose, they eroded and buried *in order* the sediments and accompanying organisms as they flowed down and settled in the depositional basins of the Flood. Hence, the sequence of the fossils reflects the altitudinal order of organisms before the Flood. It may be helpful to refer to figure 1 as we consider the following details: (1) At present many microorganisms live in deep rocks. The simple fossils now found in the Precambrian would be from organisms living in deep rocks and fossilized before, during or since the Flood. The deep sediments in which these microscopic fossils are found (Precambrian) would likely have formed before the Flood. The Flood sediments would begin with the Paleozoic. (2) Note that all the lower Paleozoic organisms are of marine origin. These represent the organisms originating from the lowest seas before the Flood, and this is an excellent explanation for the Cambrian explosion. (3) As we continue up the fossil record the first land organisms appear in the middle Paleozoic (Silurian). These would represent the lowest land deposits originating from the lowest land regions of pre-Flood continents. (4) In the upper Paleozoic and the Mesozoic we find many fossils of strange plants and animals such as dinosaurs that do not now live on the earth. Before the Flood these unfamiliar organisms had to survive and they lived at these intermediate levels. (5) The mammals and flowering plants lived in the highest regions, possibly kept there by warmer temperatures at lower levels and/or competition from the strange organisms of the Mesozoic and below. There is erratic increase in complexity as one ascends up the fossil record, but there would also be some of that if our present earth were buried by a gradually rising flood. As we ascend through present living forms on the earth, we first find microorganisms, then marine forms, and then the most advanced forms higher on land. Facts like the Cambrian explosion and no land organisms until the middle Paleozoic fit remarkably well with the biblical Creation and Flood model.²⁴

Some wonder why humans are not found throughout the fossil record; they are found only near the top. Factors from within a Flood context could provide an explanation. There may not have been a huge number of humans to be preserved by the Flood, since rates of reproduction appear to have been significantly lower then. The genealogical records in Genesis suggest that, on average, a patriarch was over one hundred years old when his first son was born. Also, during the Flood humans may have attempted to escape to the highest regions, where preservation by burial from higher sediments could not occur.

Geologic Ages or a Biblical Time Scale?

Geologists and many other scientists often refer to millions or billions of years for the age

of various fossils. Radiometric dating is often invoked as evidence for such age.²⁵ The scientific literature contains a plethora of these old dates that are in conflict with the biblical model that life was created only a few thousand years ago. However, there is considerable scientific data that favors more the biblical model than long evolutionary geologic ages.

1. Erosion of the continents is currently so fast that they could have been eroded to sea level over one hundred times during the proposed long geologic ages.²⁶ Why are they here if they are so old? Some suggest renewal of the continents from below, but this is not an adequate answer since much of the geologic column remains on the continents, from young to old, and the earth has obviously not even gone through one full cycle of erosion.

2. Likewise, using very conservative calculations, at the rate rivers carry sediments to the oceans, the present volume of the oceans could have been filled up with sediment more than seven times over the billions of years postulated.²⁷

3. Flat surfaces like Kangaroo Island (discussed above) that are assumed to be very old, should not be so flat and should actually have all been eroded away over the long geologic ages suggested.

4. The flatness of the sedimentary layers below and above the many long flat gaps (the paraconformities, discussed above) indicates rapid deposition of the sedimentary record.

5. Carbon-14, which has a half life of only 5730 years, should not be present *at all* in samples older than a million years. Yet marine fossils, coal, graphite and even some diamonds, assumed to be up to hundreds of millions of years old, still contain some carbon-14, suggesting they are relatively young.²⁸

6. Protein molecules are not expected to survive very long, especially since some of their amino acids are quite delicate. Some suggest thousands to possibly one million years as their maximum endurance. Yet, fresh-looking soft tissue and suggestions of blood cells have been found in a fossil dinosaur that is supposed to be seventy-eight million years old.²⁹ Maybe dinosaurs are not that old after all!

7. According to evolutionary theory, humanity has existed for two hundred to five hundred thousand years and the genus *Homo* for two or more million years. Humans reproduce so rapidly that world population now doubles in much less than one hundred years. At the present rate of reproduction and starting with two parents, it would only take a very few thousand years to produce the present world population. It does not appear that humans have existed as long as evolution suggests, or the world would be overcrowded.

8. Likewise, convincing archaeological evidences for developed human activity such as writing and major architectural constructions like aqueducts and pyramids are only a few thousand years old.

9. Mutations are notoriously harmful to the development and continuity of life, and calculations indicate that because of the high mutation rate recently found, humanity should have degenerated to the point of extinction a long time ago. How has humanity survived against such damaging odds if we have existed for several hundred thousand years or more?³⁰

10. Evolution needs considerable time but the long eons of the geologic column are much *too short* for the improbabilities envisioned. The molecular biologist Herbert Yockey calculates that it would take 10^{23} years to produce by chance a single specific protein molecule.³¹ The assumed age of the earth is ten billion times too short to make a single specific protein molecule, yet the simplest

known organism has hundreds of thousands of these molecules. When quantitatively evaluated, the billions of years proposed for evolution do very little to facilitate the numerous improbabilities involved. Creation, understood in the light of all the available data, seems not only plausible but necessary.

In Conclusion: A Remarkable Prediction

The scientific community strongly endorses the idea of a long evolutionary process. This should be expected since because, with its present ethos, science is closed to the biblical model of a Flood and to God as Creator. These exclusions are remarkably strong and widespread, but should not surprise us since two millennia ago it was predicted in the Bible that precisely such an attitude would prevail in the end time. Referring to the “last days” it says of the “scoffers” of that age, “For this they willingly are ignorant of [“deliberately overlook,” ESV], that by the word of God the heavens were of old, and the earth standing out of the water and in the water: whereby the world that then was, being overflowed with water perished” (2 Pet 3:5-6, KJV). What is so remarkable about this prediction is that the apostle Peter, who could have mentioned many other ideas that would be “willingly” ignored in the last days, specified the very two major concepts where scientists disagree with the Bible and on account of which the Bible as a whole is discredited. In the last century and a half they have given us evolution to replace Creation and the long eons of geologic time to replace the Flood. This remarkable prediction authenticates the Bible, and at the same time points out the fundamental problem in much contemporary science – willing ignorance.

The verdict, then, must be that there is *considerable* scientific *data* that is hard to explain unless one accepts the reality of the Genesis Flood. That Flood is the event that reconciles the fossil record with a recent creation. The Bible, folk literature and significant scientific data authenticate that astonishing event and thereby help to validate the actuality of the Genesis Creation account.

Figure 1

Major divisions of the fossil record at the left and some representative organisms to the right.

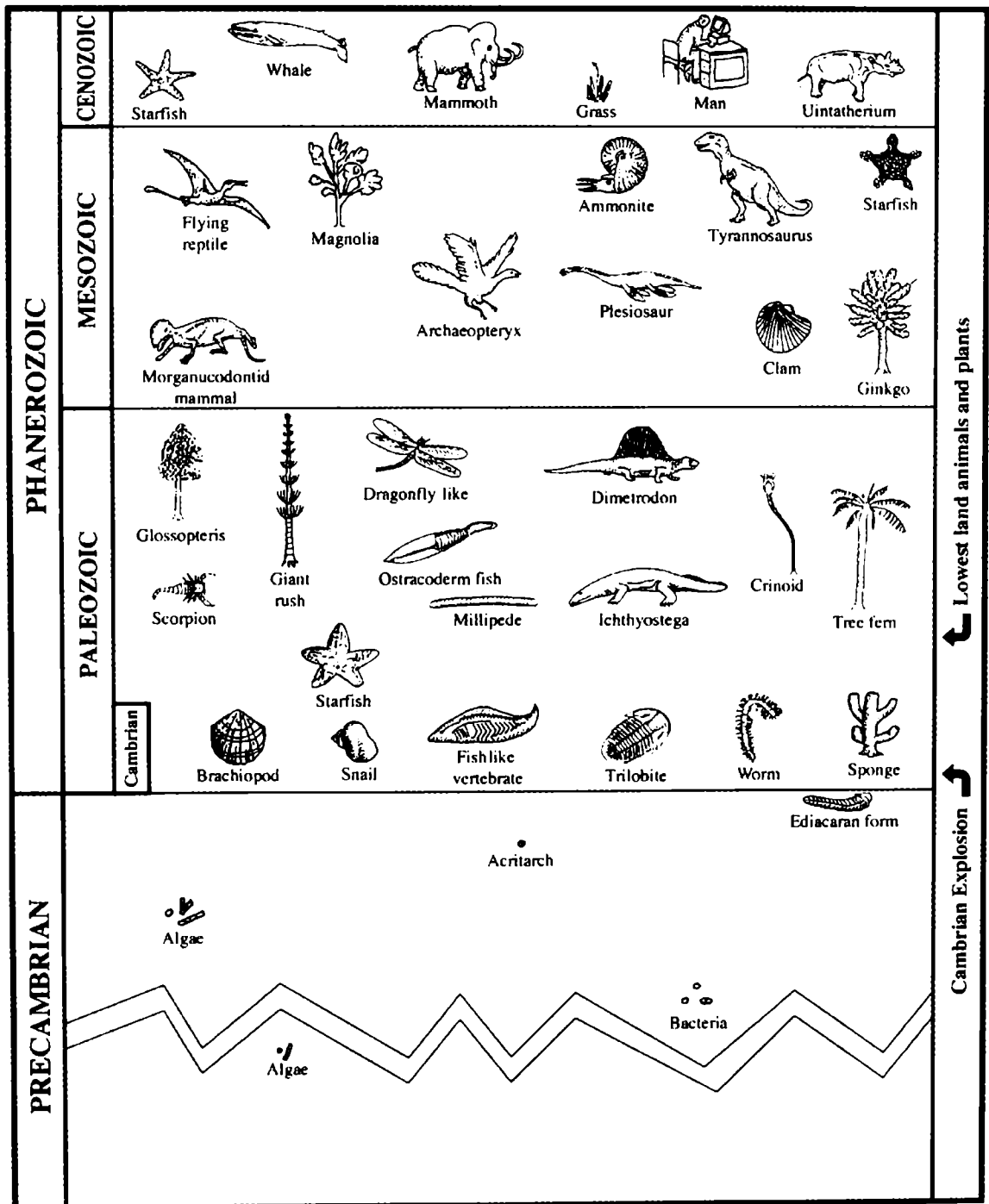


Figure 2

Five Mesozoic Formations viewed above the eastern shore of Steinaker Reservoir in northern Utah. (See text for details.)

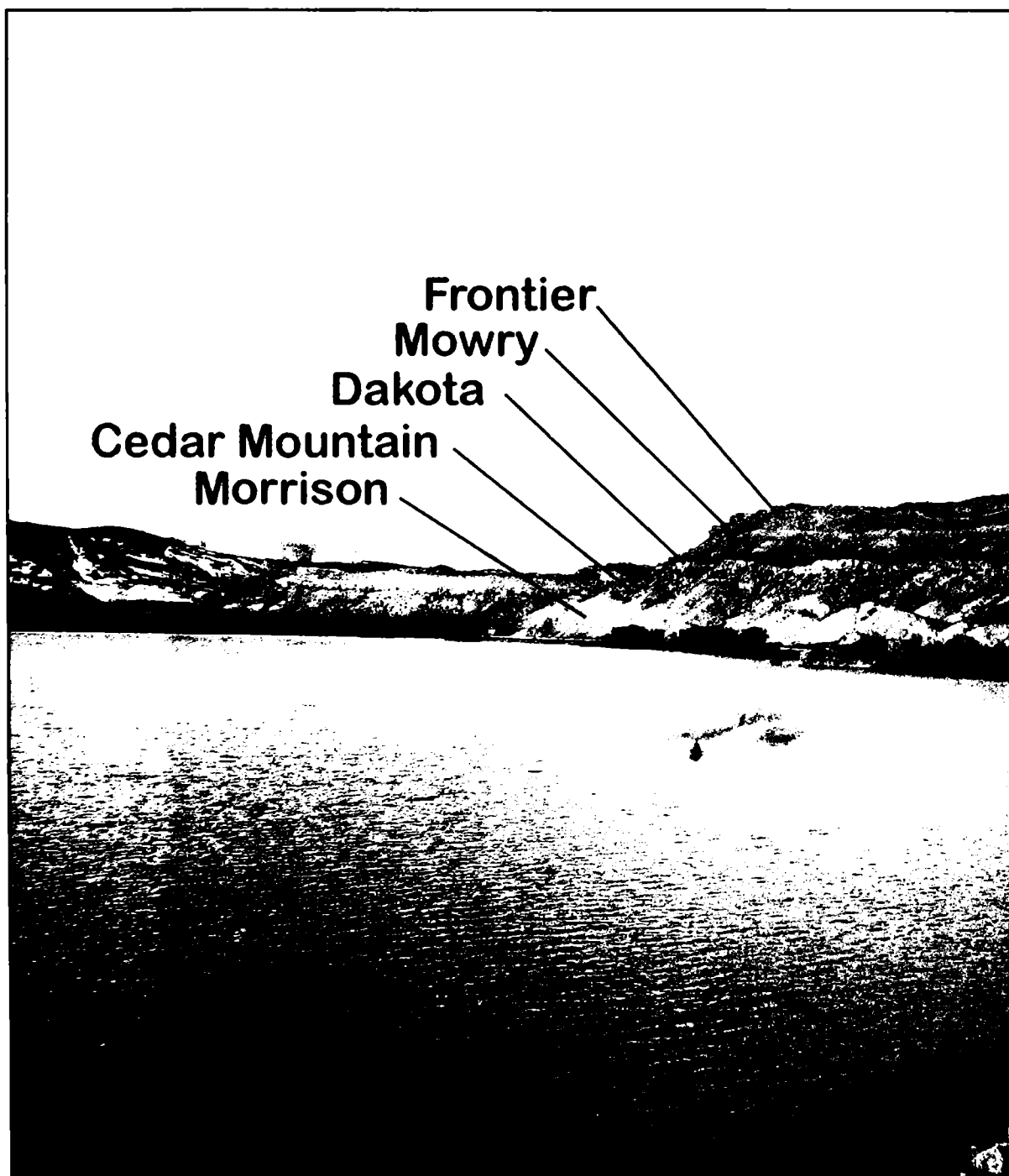
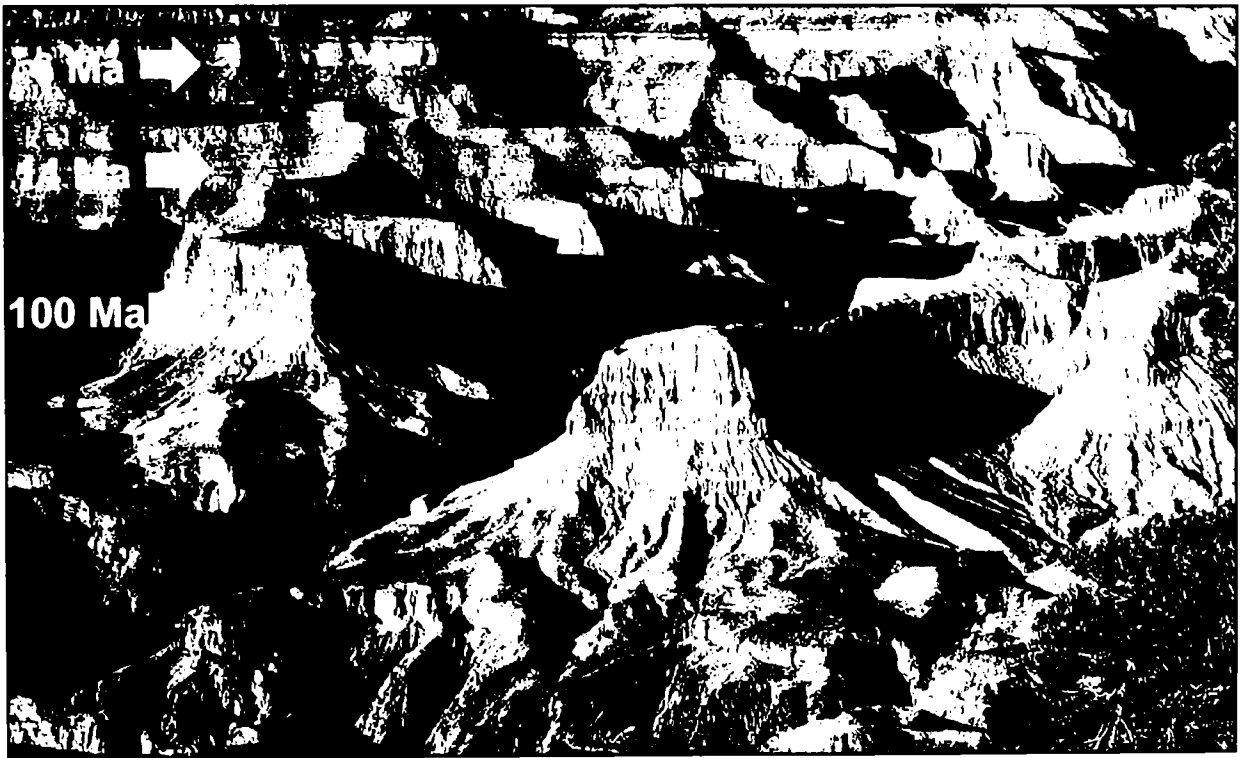


Figure 3

View of the Grand Canyon of the Colorado River looking toward the north. The three arrows designate where major portions of the geologic column are missing and represent gaps assumed to be of 6, 14 and 100 million years (Ma) duration. Note the flatness of the layers, especially at the gaps.



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Chapter 16

SOCIAL DARWINISM: SOME CONSEQUENCES OF EVOLUTIONARY THINKING

Reinder Bruinsma

There have been several widely reported terrorist attacks in recent years that have resulted in great loss of human life. Besides the 9/11 atrocity in New York, the Columbine school massacre and the Tuusula high school shooting in Finland come to mind.

Following November 7, 2007, the Jokela High School in Tuusula, Finland, was in the news all around the world. Pekka-Eric Auvinen, an eighteen-year-old student, shot his teacher with a SIG Mosquito .22 caliber pistol, then killed seven fellow students, before he turned his weapon on himself. Witnesses have stated that the killer seemed to make a deliberate selection of his victims, as if he wanted to weed out those he felt were unfit to live. In fact, there is reason to think that this was indeed the case. There is evidence that Pekka was not just a troubled young man who went crazy after taking too many antidepressants, but was a convinced social Darwinist determined to do his part in the much needed work of promoting the idea of the survival of the fittest.¹ In a YouTube film, subsequently removed, he emphasized that the deed he planned was not inspired by computer games, films or books, but rather by his Darwinist convictions. There is reason to believe that the infamous Columbine school shooting in 1999, in which thirteen people were brutally killed, also had a definite link with Darwin's theory of evolution. One of the two killers, Eric Harris, wore a "Natural Selection" T-shirt, and there is evidence that the two young men had been convinced through their evolution classes in school that "inferior types" were expendable.²

These incidents – as bizarre and rare as they may be – are vivid reminders of the far-reaching implications of Darwinian ideology. This chapter will survey some of the many ways in which Darwinism has influenced various aspects of life, impacting on many disciplines besides biology and natural history. Other contributors to this present volume have commented on the theological and scientific implications of evolutionary thinking and on the extreme and often almost irrational way in which some atheistic proponents of the evolution gospel have tried to vilify and ridicule those who defend the biblical view of origins.³ But it is vital also to point out that the theory of evolution has been, and still is, a strong influence in several domains of life other than biology. Many generally accepted anthropological theories leave no room for the biblical account of the origin of man, as they "visualize a gradual divergence of man and apes from a common ancestor" some seventy million years ago.⁴ The great majority of geologists work within an evolutionary framework, as do most physicists. Other disciplines also, including psychology, sociology, philosophy and history, base their approach nowadays largely on evolutionary assumptions. Medical research and practice, economic theories and political ideologies, including Christian teachings about war and peace,⁵

have all been deeply affected by evolutionary principles. Moreover, it has been convincingly shown that Darwinian ideas exerted a determinative influence on such totalitarian movements as Nazism and Communism. And although Seventh-day Adventists have been among the fiercest critics of evolution, it cannot be denied that at times they also, perhaps unwittingly, have not been beyond the reach of some of the ideas derived from Darwinian principles.

In this chapter we will focus in particular on the emergence of so-called social Darwinism and some important developments that are rooted in it. However, before we attempt to define what we mean by that term, we need to remind ourselves briefly of core Darwinian thinking as such, even though it has been defined by previous contributors to this book.

The Implications of Natural Selection

“Natural selection” and “the survival of the fittest” are among the key concepts of evolutionary thought. After years of observing and studying plants and animals in several parts of the world, Charles Darwin (1809-1882) concluded that the origin of biological species⁶ may best be explained on the basis of slow adaptations to changing environments, through variation and natural selection. The subject matter of his second important book was, however, even more significant for the issues addressed below. In *The Descent of Man, and Selection in Relation to Sex* (1871),⁷ Darwin addressed the evolution of man and his close relationship with apes, but also developed theories that went beyond biological factors and ventured into the area of the evolution of man’s mental powers and even his moral and ethical faculties. Darwinian theories about the origin of the human race and about “the survival of the fittest” were, of course, not developed in a vacuum. Others, prior to Darwin and contemporary with him, had already suggested an evolutionary approach to nature. Important names such as the British geologist Charles Lyell (1797-1875) and the atheistic German philosopher Friedrich Nietzsche (1844-1900) come to mind, while the ideas propagated by the famous demographer Thomas Malthus (1766-1834) also played a significant role. Subsequently, other scientists and philosophers built on the evolutionary platform that was popularized by Darwin.

It remains a much-debated issue to what extent the main ideas of social Darwinism, which would frequently inspire active racism through “race betterment” initiatives and large scale (and, ultimately, lethal) eugenics, were actually shared by Darwin himself. There is some evidence, however, that early in Darwin’s thinking he was already linking his developing evolutionary views to the advancement of the human race. Darwin visited Australia in the 1830s and learned about the appalling massacre of Aborigines in Tasmania. It is clear that he held a low view of the Aboriginal peoples, and regarded this now infamous episode in early Australian history as “inevitable” and evidence of the survival of the fittest, recording the event and his views in his diary.⁸

On the other hand, there appears to be enough good evidence to conclude that some of Darwin’s keen followers were primarily responsible for the active promotion of the various human interventions that were to help along the process of “race betterment” on the basis of preconceived notions as to what sections of humanity were to be considered “fittest.” Herbert Spencer (1820-1903) – who in 1864 in his book *Principles of Biology* actually coined the term “survival of the fittest” after reading Darwin’s *Origin of Species* (1859), William Graham Sumner (1840-1910) and Francis Galton (1822-1911) – who may justifiably be called the father of modern eugenics – deserve special mention in this connection. And the role of Karl Marx (1818-1883) in stimulating the kind of

climate in which social Darwinism could flourish cannot easily be overemphasized.

Understandably, Charles Darwin had, at the very least, ambivalent thoughts about the social implications of his evolutionary convictions such as the desirability of eugenics. He knew that, from the standpoint of “the survival of the fittest,” his own family’s prospects were rather dim. The Darwin clan was in various ways connected with the Wedgwood family (the owners of the famous pottery firm bearing that name) and Darwin himself was aware of the risks of marriages between cousins. At one time, when the Darwin family was once again suffering a patch of ill health, Darwin wrote to one of his friends, “We are a wretched family and ought to be exterminated.”⁹ The untimely death of three of his ten children, and in particular of his ten-year-old daughter Annie, on whom he doted more than on any of his other offspring, for some time cast deep shadows over his thinking about the evolutionary process.¹⁰

A recent and amply documented book quite convincingly argues that Charles Darwin firmly believed in the basic unity of the human race and did not share in the opinion of many of his contemporaries, and of many subsequent Darwinians, that some sections of mankind are inherently inferior to others.¹¹ Darwin’s close encounter with slavery early in his life, as well as the influence of the Wedgwood family, to which he was closely related and which was recognized as one of the most prominent voices of the time against slavery, made him forcefully reject both slave-trading and slavery itself. Nonetheless, Darwin recognized that “weaker” races could, for various reasons, become extinct and he did, at times, rationalize the darker sides of colonial supremacy.¹² He recognized that programs to assist the disenfranchised and physically impaired might lead to a degeneration of the human race, but nevertheless he believed that it was man’s duty to look after the sickly and needy.¹³ Others, looking at the same phenomena as Darwin, came to different conclusions.

The British sociologist, philosopher and anthropologist, Herbert Spencer, is often referred to as the pioneer of social Darwinism.¹⁴ Spencer, not only inspired by Darwin’s ideas but also heavily influenced by Lamarckism,¹⁵ believed that it would be much better for humanity in the long run if the weakest were allowed to perish. Measures to help them overcome their plight, he believed, were not only against nature but were harmful for the common good. One of Spencer’s most-cited statements regarding the weaker segments of society provides the gist of his thinking: “If they [the weak] are sufficiently complete to live, they do live, and it is well that they live. If they are not sufficiently complete, they die, and it is best that they should die.”¹⁶ Even though he was prepared to allow for this process to be somewhat mitigated by “the spontaneous sympathy of men for each other,” Spencer’s approach in applying the biological scheme of evolution to society became very influential, in particular in the United States, where he was widely read and his views effectively popularized by others.¹⁷

Another important name connected with the origins of social Darwinism and its growing popularity in the nineteenth century was that of William Graham Sumner, a renowned sociologist at Yale University.¹⁸ Building on concepts proposed by men like Malthus and Spencer, Sumner was more brutal in the strategies he advocated. He applied the principle of natural selection to the realm of economics and vehemently opposed the popular American principle of equality for all. The laws of nature, he said, must do their work, even if this leads to unrestricted competition and vast inequalities in wealth. His belief in “the survival of the fittest” led him to fiercely oppose social

legislation aimed at bettering the plight of the poor. Poverty, Sumner maintained, is simply part of the struggle for existence that must be allowed to run its natural course. He used “his evolutionary determinism to bludgeon the soft-hearted reformism of governmental intervention of all types.”¹⁹

A third prominent person who must be mentioned in this connection is Lester Ward (1841-1913), an American paleobotanist, sociologist and educator.²⁰ He can only be described as a social Darwinist in a qualified sense. His working-class background no doubt influenced his critical approach to the ideas of men like Spencer and Sumner. Though he saw the history of mankind in terms of a relatively blind but somewhat progressive evolution of the social order, he believed that man as an intelligent and rational being is able to direct his further evolution. He opposed the philosophy of pure *laissez-faire* capitalism and advocated a definite role for the government to stimulate human progress, especially through education.²¹

***Laissez-faire* Capitalism**

One of the very visible outcomes of applying Darwinian principles in economics and politics is the development of a ruthless *laissez-faire* capitalism in the late nineteenth-century and early twentieth-century America – a development that, one may argue, is still leaving its mark on some aspects of our current free-market economy.²² It has been claimed that “the single most important and controversial legacy of Darwinism to economic thought is the use of natural selection in justifying competitive selection in the marketplace.”²³ Although extreme *laissez-faire* capitalism was not limited to the United States and was also found elsewhere – most notably in England, where it perfectly expressed the Victorian greed-philosophy of the times – it flourished in America more than anywhere else. As a result of the Industrial Revolution business boomed as never before as huge amounts of capital became available and the rapidly expanding rail network opened previously unheard-of marketing opportunities.

Competition became the fiercely affirmed law of American life. “Everyone with a little money plunged into the market, hoping to get richer quickly by finding a business which could crush its rivals . . . inventors rushed to the patent office with their new devices and then hurried to find capitalists to manufacture and sell them.”²⁴ Successful entrepreneurs often interpreted the “survival of the fittest” theory as an ethical concept that could sanction cutthroat economic competition. Darwinism helped them to justify their policies, even when they were unethical or even illegal, as morally defensible and natural. Their extremely individualistic approach, in which other persons often counted for nothing, suggested to them that it would be completely natural to exploit weaker companies.²⁵ Sumner called the millionaires of his days “the naturally selected agents of society” who had been selected for success and could therefore be trusted with their great wealth and power.²⁶ Die-hard social Darwinists remained blind to the “normative risks” that occur when the idea of natural selection is used as “a conceptual anchor for competitive selection in economic life,” since it “desensitizes people to the plight of those who bear the cost of competitive selection” and takes for granted that there simply will always be winners and losers in the marketplace.²⁷

Though certainly not all the captains of American industry of that period were primarily driven by Darwinian motives, and the Protestant work ethic and the ideals of industriousness and thriftiness no doubt also continued to play their part,²⁸ some of the most well-known icons of capitalism, often referred to by the pejorative term of “robber barons,” did not hide that they were inspired

by Darwinian concepts. It suffices here to mention briefly two of them, the steel magnate Andrew Carnegie (1835-1919), and the founder of Standard Oil John D. Rockefeller (1839-1937). Both were controversial: they have been detested as ruthless capitalists, but both men also have been highly admired for their philanthropic initiatives.

Carnegie adopted the Spencerian notion of evolution as progress. He had little regard for the interests of his workers. Though he realized that the law of competition could be hard for individuals, he believed “it is best for the race, because it ensures the survival of the fittest.”²⁹ When Carnegie retired, he had more than just survived. He sold his company for 480 million dollars to the banker John P. Morgan, who then enlarged the steel empire even further.

Rockefeller, the famous oil magnate, has been called the richest man in history. At any rate, he was the first American with a personal worth of more than one billion dollars.³⁰ In 1903 Rockefeller gave a speech in which he said that just as the “American Beauty Rose can be produced in the splendor and fragrance that brings cheer to the beholder only by sacrificing the early buds which grow up around it,” so big business follows the laws of nature and “the growth of a large business is merely the survival of the fittest.”³¹ Like other big capitalists, Rockefeller readily adopted the scientific rationale that allowed him and his colleagues with a good conscience to do business in a Darwinian thought context that made them rich.

Eugenics

Another outgrowth of Darwinian thought was the dramatic development of the controversial eugenics movement. A typical dictionary definition of the term eugenics is “The science of improving the population by controlled breeding for desirable inherited characteristics.”³² As we will see, this “controlling” process has led to practices and policies of a dubious nature, to say the least. This is not to say that discussions about population issues, abortion, the size of families and measures to keep certain people from parenthood are necessarily inspired by the eugenics ideas of social Darwinism. Ethicists, including those with Christian views, have an important role in helping to guide society to find answers to the many complicated questions involved.

From antiquity onwards there have been those who encouraged healthy, productive and intelligent people to reproduce, while individuals on the margins of society, such as the chronically ill or the mentally disabled were dissuaded from doing so, either by custom or through law. But it was not until the end of the nineteenth century that a program of selective human breeding based on systematic, supposedly scientific, principles was proposed. In view of the strong emphasis on hereditary qualities, the link with Darwinism is immediately obvious – it has aptly been referred to as “Darwinism’s most enduring trait.”³³ In the period between 1900-1940 both Darwinism and genetics found a more or less coherent expression in numerous eugenics initiatives, but it was only after the Nazi horrors of World War II became fully exposed that eugenics in their Darwinian garb became generally suspect.³⁴

The term “eugenics” (from the Greek, meaning “well born”) was coined by Charles Darwin’s half-cousin Francis Galton (1822-1911), the early promoter of the movement in its modern form. The term was used to describe a new science that would focus on improving mankind by the judicious matching of parents who possessed “superior” traits.³⁵ Galton became one of the early leaders of the British Eugenics Society, which still exists today, though renamed in 1989 as the Galton Institute.

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A major Christian concern is, of course, that eugenics is clearly based on the evolutionary idea that society will continually progress towards perfection, with no need for any divine intervention, let alone a final judgment and the miracle of the creation of a new earth to replace the present one.

The powerful movement that arose and quickly grew in Britain gained widespread support from scientists as well as politicians, while other influential individuals also weighed in. George Bernard Shaw (1856-1950), the Irish-born playwright, was among the strongest defenders of eugenics and repeatedly even spoke of the desirability of a “lethal chamber” in order to exterminate those who were not suitable to live. Strenuous efforts in Britain to pass eugenics legislation were eventually successful. In 1912 the Feeble Minded Persons Bill, which did not go as far as demanding compulsory sterilization, as many had wanted, was to have made marrying a mentally deficient person, or playing an active role in bringing about such a marriage, a punishable misdemeanor. The bill was defeated, but renewed efforts one year later were successful, when – with the full support of Winston Churchill – the Mental Deficiency Act, which allowed for detention of “mentally defective” persons, was passed. The law remained on the books for over half a century. Precisely at that time the first International Eugenics Conference was held (with Churchill as its vice-chairman) resulting in further public pressure, which may have been an additional factor in getting the bill adopted. Several attempts to introduce bills that would proscribe sterilization measures were, however, rejected by the House of Commons, notably in 1931 and 1934, at a time when elsewhere in the Western world such legislation was being passed.

There is no space in this limited treatment of social Darwinism to list all the eugenics initiatives that were seen in continental Europe. For several decades in the last century eugenics flourished in Scandinavia. In Denmark pelvic irradiation for female and vasectomy for male mentally impaired people was introduced. Since the acceptance of their first sterilization law in 1929 (in Denmark), around forty thousand Scandinavians have been sterilized for eugenics reasons. In Sweden around 18,600 people, predominantly women, were sterilized on eugenic or “social” grounds under the 1935 Swedish sterilization law, before its repeal in 1975,³⁶ but some estimates of the Swedish totals are considerably higher – certainly if those affected by subsequent new legislation are included.³⁷ Iceland and Estonia had similar laws and Switzerland passed a eugenics law in 1928 to control the gypsy population. This law was not repealed until 1972. We will return below to the unfortunate popularity of eugenics in pre-World War II Germany. But first we turn to the United States.

The eugenics movement soon spread from Britain to the United States, where in 1922 and 1928 respectively, the American Eugenics Society and the Human Betterment Foundation were established.³⁸ The idea that hereditary mental illness could be halted by sterilization gained many adherents in the United States. The first state that adopted a forced sterilization law was Indiana (1907), an initiative that was eventually followed by many other states.³⁹

An important role was played by an institution in New York that still exists today as a respected research center, but was known during the first period of its existence as the Station for Experimental Evolution, with Charles Davenport, a prominent American geneticist, in charge. It was established in 1904 with financial assistance from the Carnegie Institute and was to be closely linked to the Eugenics Record Office, which among other tasks collected a vast amount of data on various characteristics of American families. This latter institution was also financially endowed by a rich philanthropist. Davenport’s assistant, Harry L. Laughlin, reigned supreme there for some thirty years. He became

an international authority on eugenics legislation. It should be noted that he developed strong Nazi sympathies, which he never concealed. Oddly enough, the fact that he himself was an epileptic made him actually eligible for sterilization under the laws he championed.⁴⁰ Just prior to World War II Laughlin's eugenics activities were halted.

Eugenics was not only deemed laudable, but even necessary from the standpoint of improving the physical and mental condition of the American people. Financial arguments also played a continuing role, since supporting the "unfit" was an enormous burden to the taxpayer.⁴¹ However, the linkage between moral traits and mental defects was the most important "fact" that the eugenicists had imbibed from Darwin. For many in American society dealing with those who were considered mentally defective became a matter of priority.⁴² The asylum population grew by leaps and bounds and it could truly be said that "the Darwinists had taken over the asylum."⁴³

At the same time the sentiment grew that just locking up the mentally deficient in asylums was not enough, and that further concrete measures were needed to ensure that the "feeble-minded" would not be able to procreate. The *Buck v. Bell* case in 1927 was of enormous importance in this connection. Three years earlier the superintendent of the Virginia State Colony for Epileptics and Feeble Minded had filed a petition with the authorities to be allowed to sterilize eighteen-year-old Carrie Buck, who was a patient in his institution. Her mother had been diagnosed as retarded and had a record of prostitution and immorality. The daughter Carrie had, it was concluded, inherited these negative moral traits, which was confirmed by the fact that she had given birth to an illegitimate child. (Only later did it become known that Carrie had, in fact, been raped.) The request led to lengthy litigation, which ended when, in an 8-1 decision, the U.S. Supreme Court decided that mother and daughter were indeed "feeble minded" and "promiscuous," and that it was therefore in the state of Virginia's interest to have Carrie sterilized. The judge who wrote the ruling concluded that the interest of the state in a "pure" genes pool outweighed the importance of the bodily integrity of the individual.⁴⁴

The first sterilization law in Indiana (1907) had run into legal problems, but now a solid foundation was laid for this kind of legislation by the states. It has been estimated that in the thirty-three states that enacted such legislation, over sixty thousand persons were subjected to this procedure.⁴⁵ The last state to repeal its sterilization law was Oregon in 1983. However, even greater numbers of poor people were pressured into undergoing this procedure under federal programs, often with the threat that welfare payments would be withheld if the people concerned would not cooperate. "White trash" was targeted, but more often African Americans and Native Americans received this dubious attention and the "project often seemed to be primarily aimed at purifying the Caucasian bloodline."⁴⁶

From an Adventist perspective it is interesting to note the keen interest in the eugenics movement on the part of Dr. John Harvey Kellogg, the Adventist health pioneer. Among the many activities this unbelievably energetic medical maverick was involved in were his initiatives and leadership in the area of eugenics.⁴⁷ In 1914 Kellogg renamed the American Medical Missionary Board as the Race Betterment Foundation. He consciously adopted the eugenics terminology in order to gain wider support from adherents of the eugenics movement. In 1914 and subsequent years Kellogg was the main player in the organization of some widely publicized "race betterment conferences," where prominent speakers from the world of eugenics, including Davenport, were active participants.

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Kellogg was, of course, very much aware of the links between Darwinism and eugenics. He tried to play down this aspect as much as possible, in particular while he was still formally connected with the Adventist Church, which he had left in 1907. In all fairness it should be mentioned, however, that he differed from men like Francis Galton in maintaining that hereditary developments went in two directions and that also positive traits, once acquired, could be passed on. This, Kellogg believed, provided an extra rationale for his emphasis on “health reform,” since a healthier lifestyle would not only benefit the individual concerned, but also the entire human race.

Race “Betterment”

Eugenics and racism were often not far apart. There can be little doubt that social Darwinism not only fueled eugenics but also even uglier forms of racism. That the strong survive and overcome the weak is the Darwinian adagio. Human life follows that pattern: individuals, commercial companies, social classes, nations and races struggle for supremacy, and the strong overcome the weak. Moreover, the poor and the weak are unfit to survive. Helping them violates the evolutionary process and is therefore wrong.⁴⁸ Had not Darwin written in *The Descent of Man* about the likelihood that backward races would totally disappear from the face of the earth before the advance of higher civilizations?⁴⁹

In the nineteenth-century United States the conviction grew that the Anglo-Saxon race, in particular, was much more developed and that other nations and ethnic groups would have to face up to that undeniable fact. The myth of America’s “Manifest Destiny,” the belief that the United States was destined to expand across the North American continent, and which was first used in the 1840s to justify the annexation of Mexico, was strengthened by the Darwinian idea that a modern nation is like an organism that will either evolve or fall into decay.⁵⁰

Hofstadter suggests that the Darwinian mood clearly sustained the belief in Anglo-Saxon racial superiority that obsessed many American thinkers in the latter half of the nineteenth century.⁵¹ This conviction was vigorously expressed in the extremely popular book by the Reverend Josiah Strong, *Our Country: Its Possible Future and Its Present Crisis* (1885), of which hundreds of thousands of copies were sold. Strong had an “uncanny ability for assimilating the writings of Darwin and Spencer to the prejudices of rural Protestant America” and painted immigrants, Catholics, Mormons, saloons and socialists equally as enemies of the republic. But the Anglo-Saxon people were the solution, and natural selection would ensure that a new and final physical type would emerge in the United States: better, bigger, stronger, taller than even the Scots. America, Strong ensured his readers, would not only take care of Mexico, but would also prevail upon nations elsewhere in the world and would in the competition of races clearly demonstrate the survival of the fittest.⁵²

Madison Grant (1865-1937) was an American radical who gained huge popular influence. A lawyer, historian and physical anthropologist, he became especially known for his work as a eugenicist. In his famous book *The Passing of the Great Race* (1916) he described the racial history of Europe and America. The Nordic race, represented by the native New Englander, was clearly the ideal. Many of the early immigrants could qualify as Nordic. But he deplored the more recent arrivals in the U.S. – those millions who had subsequently come from southern and eastern Europe. Predictably this sentiment led to various attempts at legislation to restrict immigration from less desirable population segments, which eventually led to establishing quotas for various groups. One

of the most tragic consequences was that these measures not only targeted some southern European nationals, but would also keep out tens of thousands of Jews who desperately wanted to escape Nazi Germany.

To my knowledge little study has been done to determine to what extent Seventh-day Adventists in the period we considered in the above paragraphs were influenced by sentiments of the racial superiority of Americans of Nordic descent, although it is well documented that several of the early Adventist pioneers were active in the late nineteenth-century antislavery movement.⁵³ A bias towards a sense of racial inequality would have been wrong, but not totally unexpected, as Adventism originated and developed in particular among the Caucasian population in the northeast of the United States and mainly recruited its members from among Protestants, many of whom were of Nordic descent.⁵⁴ It cannot be denied that as time went on Adventism in North America, as in some other places, had to deal with significant internal racial and ethnic tensions.⁵⁵ But there seems to be no evidence that either Ellen White or other leaders, while approving segregation between blacks and whites in the American context in which they found themselves, and though at times making some rather questionable remarks about black citizens,⁵⁶ were motivated by any Darwinian-inspired theory of the inherent superiority of one race above another.⁵⁷

Germany: An Example of Where Social Darwinism Can Lead

Historians differ about the various influences that led Hitler to adopt his views on the desirability of an ethnically pure German “Volk” and the ever more drastic measures he ordered to bring this about. It has often been argued that the Nazi worldview was directly rooted in Darwinism. Such assertions need, at the very least, significant qualifications. Darwinism with its teachings of natural selection and the survival of the fittest and its implications of racial inequality does not inevitably lead to Nazism, and many convinced Darwinists only feel total abhorrence in the face of the policies of Hitler and his Nazi supporters. There can, however, be no doubt that Hitler imbibed social Darwinist ideas and when these were blended with a virulent anti-Semitism the Holocaust was the unimaginable result.⁵⁸

The German historian Hans Günther Zmarzlik points out that “an analysis of social Darwinism reveals a process of declining standards, accompanied by a tendency to sacrifice the individual to the species, to devalue the humanitarian idea of equality from the standpoint of a ‘natural’ inequality, [and] to subordinate ethical norms to biological needs.”⁵⁹ Most important, in the late nineteenth and early twentieth century Darwinism contributed to a new way of thinking about life and death that led many avid Darwinists in Germany to devalue human life and to accept far-reaching eugenics measures or even worse.⁶⁰ The Jewish scholar Edward Simon aptly summarized this as follows: “I don’t claim that Darwin and his theory of evolution brought on the holocaust; but I cannot deny that the theory of evolution, and the atheism it engendered, led to the moral climate that made a holocaust possible.”⁶¹

Undoubtedly, Hitler was subject to many different influences but those of Darwin and Darwinian scholars were foremost among them. The prominent Darwinian German scholar Ernest Haeckel – the chief evolutionary apostle for racial purity – had a wide following in pre-World War II Germany and his writings almost certainly had an impact on Hitler. In Hitler’s library was also a copy of a translation of Madison Grant’s book *The Passing of the Great Race*.⁶² Hitler’s biographer Alan

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Bullock seems more than justified when he said that crude Darwinism was, in essence, the basis of Hitler's political beliefs.⁶³

The interest in eugenics in Germany did not begin when Nazism came to power, but at that point it entered a totally new phase. The first Nazi law that demanded forced sterilization was enacted in July 1933. It defined which individuals were to be subjected to sterilization. It included the following categories of people with "a hereditary disease": congenital feeble-mindedness, schizophrenia, bipolar disorders, hereditary epilepsy, hereditary St. Guy's dance, hereditary blindness, hereditary deafness and severe bodily malformations, also persons affected by crises of alcoholism were listed.⁶⁴

Thus far this did not differ very much from similar laws that were in force in many countries, among them the United States, and it did not have overt racist implications. This, however, was to change. In 1935 positive eugenics initiatives were launched to stimulate the production of Aryan infants. At the same time eugenics through sterilization of "unproductive" and "inferior" elements of society became common and increasingly systematic. It is estimated that between 1934 and 1945 between 350,000 and 400,000 persons were sterilized.

The sterilization of the ill, the mentally and physically handicapped and the "abnormal," was now followed by extermination on a grand scale – hundreds of thousands of persons were killed in a merciless campaign of "mercy-killings." One of the most infamous examples was the secret operation T4 (the address of the extermination facility was Tiergarten 4, Berlin) where between seventy thousand and one hundred thousand "defective" children below the age of seventeen were killed.⁶⁵ The amazing fact is that the medical establishment was, in general, quite willing to comply with Nazi directives. Sewell finds the explanation for this in the fact that "Darwinian ideas, eugenics and its ugly sister eugenic euthanasia were broadly accepted by the mainstream of the medical profession." He correctly comments that this terrible euthanasia program of Nazi Germany "merged seamlessly with the Holocaust,"⁶⁶ which eventually killed millions of Jews and other people the Nazis considered undesirable and a threat to the pure Aryan race.

An Adventist Connection?

Little had been published about the influence of the Nazi racial doctrines among Seventh-day Adventists in Germany until a meticulously documented study entitled "Health Reform and Race Hygiene: Adventists and the Biometrical Vision of the Third Reich" by Roland Blaich appeared in the prestigious journal *Church History*.⁶⁷ It refers to an episode in Adventist history that many have preferred to forget. Although Blaich's study does not reveal how the average German Adventist church member thought about the lamentable trends in his country,⁶⁸ it provides a clear picture of the concerns and attitudes of the church's leadership and the position of some official church publications. To devote a few paragraphs to this regrettable episode is certainly justified, for it shows that even a group that, in theory, is determinedly anti-Darwinist, may under particular circumstances fail to recognize that it has slowly but surely incorporated ideas of social Darwinism into its thinking.

In the late 1930s the German Seventh-day Adventist leaders were, it appears, primarily focused on the survival of the organization and its structure. A complicating factor was, no doubt, the fact that Adventism could easily attract negative attention from the Nazi authorities because of its "Jewish" features, such as worship on Saturday and adherence to particular health prescripts. To lessen that danger German Adventist leaders eagerly utilized the chance to enlist their health principles – the

“right arm of the message” – to work with the state in programs to strengthen the German race. The church’s well-organized, efficient welfare organizations were well suited to that purpose.

Hulda Jost not only provided dynamic leadership for the German Advent Welfare Work, but was also able to build a significant network of contacts with high officials. She actively, and successfully, pursued close association with Nazi organizations dedicated to the welfare of “das Volk” – meaning the interests of those of pure racial German vintage. From 1933 onwards German Adventist publications supported that approach.⁶⁹ Remarkably enough, the church’s periodicals “joined the mainstream in support of ‘natural law,’ or Darwinian principles” and supported the attempts of Nazi rulers to reverse the threatening decline of the Nordic race.

Blaich notes that in its association with the programs of the state the Adventist “health reform message” underwent a significant transformation. “While continuing the traditional emphasis on healthful living,” he writes, “Adventist publications soon adopted elements of the Nazi racial agenda as well, thus, in effect, contradicting the church’s characteristic anti-Darwinist stance. A curious path led from *caritas*, the caring for the less fortunate and weak, to elimination of the weak, as the work of God.”⁷⁰

And Today?

In this chapter we have looked briefly at some of the ultimate consequences of belief in Darwinian principles. Our emphasis has been mainly historical, based on the firm conviction that we must learn the lessons of yesterday if we want to live wisely today. It seems that a lot of learning is yet to be done.

Ann Coulter (*b.* 1961), an outspoken and controversial American columnist and publicist, is a fierce critic of Darwin’s ideas. In her usual provocative way she says she is not surprised that psychopaths gravitate towards Darwinian views. Darwin, she claims, enshrined biological instincts rather than moral values. For that reason his ideas continue to have strong appeal, especially among liberals, since it lets them morally off the hook.⁷¹ But in thinking of the present-day dangers of social Darwinism we need not just refer to such disturbed individuals as those we met in the opening paragraph of this chapter. The issue is much broader than this. Contemporary evolutionary psychologists maintain, as Darwin suggested, that our moral sentiments have, to a large extent, a biological basis and qualities we used to refer to as virtues or vices are, in fact, mainly genetically based.⁷² It should be clear to any Christian believer that this has major implications.

Contemporary sociobiologists tend to explain ethical intuitions in terms of inherited patterns of behavior. Even if it be conceded that they provide some valuable insights, as John C. Polkinghorne (*b.* 1930) – viewed by many as one of the greatest recent thinkers in the realm of science and religion – is willing to do, it must be remembered that the Darwinian explanation “tells too banal a story.” Polkinghorne strongly believes that the Darwinian philosophy is not able “to account for radical altruism – the ethical imperative that leads a person to risk his or her own life in the attempt to save an unknown and unrelated stranger from the danger of death. Love of that incalculable kind eludes Darwinian explanation.”⁷³

Much more could be said, but space does not allow. In conclusion, one thing, however, needs to be stressed. Though many have learned the lessons of the Holocaust and realize how catastrophic the idea of inherent superiority of one race or ethnicity over the other can be, not all have done

so. Racism and sentiments of ethnic superiority are still rampant around the globe. Questionable theories of eugenics are still very much alive in many quarters. Economic theories that require only the “fittest” to survive are still being propagated.

Christians realize, or should do so, that the naturalistic presuppositions of Darwin’s evolutionary theories and of those who further developed them, are much stronger and more generally accepted today than in his day. In our contemporary world more and more is attributed to “nature,” to our genetic makeup, to the “laws” that govern the biological, psychological, economic, even moral and religious aspects of our life. In spite of a welcome correction from some political parties and official statements by churches and individual church leaders, and the fact that many people are waking up to the dangers of cold materialism and superficial consumerism, far too little attention is still given to man’s God-given privilege to respond to something beyond himself, to make conscious choices and to influence his own life and his environment in responsible ways. As the Creator God is accorded less and less space in our secularized Western world and as his voice is more and more silenced, the dangers of immoral and destructive Darwinian theories are more, rather than less, dangerous in today’s world than they were in the days of our parents and grandparents.

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1. Dennis Sewell, *The Political Gene* (London: Picador, 2009), 45-47. See also “Charles Darwin and the Children of Evolution,” *TimesOnline*, Nov. 8, 2009 www.timesonline.co.uk/tol/news/science/biology_evolution/article6905259.ece.
2. Sewell, *The Political Gene*, 47-48.
3. Among the fiercest contemporary opponents of the concept of creation in any form is Richard Dawkins, with influential books as *The Selfish Gene* (Oxford: Oxford University Press, 1976) and *The God Delusion* (Uxbridge, UK: Bantam Press, 2006). A powerful, conservative Christian response was provided by biologist/theologian Alistair McGrath and Joanna Collicutt McGrath, *The Dawkins Delusion: Atheist Fundamentalism and the Denial of the Divine* (Downers Grove, IL: InterVarsity Press, 2007).
4. Henry M. Morris, “The Influence of Evolution,” *Bibliotheca Sacra* 129, no. 514 (1972), 116-123.
5. See, e.g., Paul A. Lewis, “Implications of Evolutionary Theories for Christian Teachings about War and Peace,” *Perspectives in Religious Studies* 33, no. 4 (Winter 2006), 477-493.
6. Cf. the title of his first major book, *The Origin of Species*, published in 1859. It has been frequently reprinted and is currently readily available in numerous hardcover and paperback editions. The original title was, in fact, somewhat longer and more descriptive of its content: *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*.
7. See, e.g., the current Penguin paperback edition, 2004.
8. See his *Journal and Remarks 1832-1836*, published in 1839 as *The Voyage of the Beagle*, 532-536, and Mark Francis, “Social Darwinism and the Construction of Institutional Racism in Australia,” *Journal of Australian Studies* 50/51, 90-105 and “Charles Darwin on Aboriginal Australians” at www.australianmuseum.net.au.
9. Sewell, *The Political Gene*, 57.
10. See Randal Keynes, *Annie’s Box: Charles Darwin, His Daughter and Human Evolution* (London: Fourth Estate, 2001).
11. Adrian Desmond and James Moore, *Darwin’s Sacred Cause: Race, Slavery and the Quest for Human Origins* (London: Penguin Books, 2010).
12. *Ibid.*, 147.
13. Sewell, *The Political Gene*, 36.
14. Richard Hofstadter, *Social Darwinism in American Thought, 1860-1915* (Boston, MA: Beacon Press, 1992), 31-50. This influential book was first published in 1944.
15. The French biologist Jean Baptiste Lamarck (1744-1829) advocated the view that organisms are able to transfer acquired characteristics to their posterity.
16. Herbert Spencer, *Social Statics* (London: John Chapman, 1851), 323-325.
17. Bruce Kuklick, *A History of Philosophy in America, 1720-2000* (New York: Oxford University Press, 2001), 98-99.
18. Hofstadter, *Social Darwinism*, 51-66.
19. Sydney E. Ahlstrom, *A Religious History of the American People* (New Haven, CT and London: Yale University Press, 1972), 790.
20. Hofstadter, *Social Darwinism*, 67-84.
21. Henry Steele Commager, *The American Mind* (New Haven, CT and London: Yale University Press, 1950).
22. An extreme example may be found in the philosophy of Ayn Rand. She applauds raw capitalism in the following words: “When I say ‘capitalism’, I mean a full, pure, uncontrolled, unregulated *laissez-faire* capitalism – with a separation of state and economics, in the same way and for the same reasons as the separation of state and church.” Ayn Rand and Nathaniel Brandon, eds., *The Virtue of Selfishness* (New American Library, 1964), 33. This very much sounds like an echo of Friedrich Nietzsche. For another modern example of a contemporary application of Darwinism to business practices, see Robert Blake *et al.*, *Corporate Darwinism* (Houston,

TX: Gulf Publication, 1996).

23. Albina Barrera, "Darwinism and Economics", in Louis Caruana, ed., *Darwin and Catholicism* (London: T&T Clark, 2009), 151.

24. Hugh Brogan, *The Pelican History of the United States* (London: Penguin Books, 1985), 396. See the chapter "The Billion-Dollar Country 1865-1900", 386-417.

25. Jerry Bergman, "Darwin's Influence on Ruthless Laissez-Faire Capitalism," www.icr.org/i/pdf/imp/imp-333.pdf.

26. Sewell, *The Political Gene*, 41.

27. Barrera, in Caruana, *Darwin and Catholicism*, 154.

28. Sewell, *The Political Gene*, 40.

29. Quoted in Kenneth Hsu, *The Great Dying: Cosmic Catastrophe, Dinosaurs and the Theory of Evolution* (New York: Ballantine Books, 1986), 10.

30. S.v. "John D. Rockefeller," www.en.wikipedia.org/wiki/John_D._Rockefeller.

31. Quoted in Hofstadter, *Social Darwinism*, 45.

32. *Reader's Digest/Oxford Complete Wordfinder*, Sara Tulloch, ed., (Oxford: Reader's Digest, 1993).

33. Hofstadter, *Social Darwinism*, 161.

34. Andre Pichot, *The Pure Society: From Darwin to Hitler* (London and New York: Verso, 2009), 131-132.

35. "Eugenics" in John McQuarrie and James Childress, eds., *A New Dictionary of Christian Ethics* (London: SMC Press Ltd, 1986), 209-210.

36. For an extensive report, see Gunnar Broberg and Nils Roll-Hansen, *Eugenics and the Welfare State: Sterilization Policy in Denmark, Sweden, Norway and Finland* (East Lansing, MI: Michigan State University Press, 2005).

37. Pichot, *The Pure Society*, 156.

38. For a succinct review of the popularity of eugenics in the United States, see Pichot, *The Pure Society*, 148-173.

39. Prior to sterilization laws, in the last part of the nineteenth century some American legislation was initiated that forbade certain categories of the population to intermarry. This did not only concern interracial marriages, but also marriages with mentally impaired persons, alcoholics and those suffering from venereal diseases. The first such law was passed in Connecticut in 1896. Soon other states followed (Pichot, *The Pure Society*, 150). For more details, see also D. J. Kevles, *In the Name of Eugenics* (London: Harvard University Press, 1995) and S. Kühl, *The Nazi Connection: Eugenics, American Racism, and German National Socialism* (Oxford: Oxford University Press, 1994). Kevles's book is a standard reference book for eugenics in Anglo-Saxon countries.

40. *Ibid.*, 149.

41. This argument was also of importance in the later German measures against the disabled; see Richard Weikart, *From Darwin to Hitler: Evolutionary Ethics, Eugenics, and Racism in Germany* (New York: Palgrave Macmillan, 2004), 98, 101. See also Richard Weikart, *Hitler's Ethic: The Nazi Pursuit of Evolutionary Progress* (New York: Palgrave Macmillan, 2009).

42. One of the methods that was explored and widely implemented on asylum patients was an operation referred to as a lobotomy. In the middle decades of the twentieth century in the United States at least a few hundred thousand mental patients, willingly or unwillingly,

underwent this procedure whereby a section of the brain was removed. Walter Freeman (1895-1972) was the best known pioneer of this treatment. For a fascinating account of his career, see Jack El-hai, *The Lobotomist* (Hoboken, NJ: John Wiley & Sons, 2005).

43. Sewell, *The Political Gene*, 96.

44. For a summary of the background of the case and verdict, see "Buck v. Bell," www.en.wikipedia.org/wiki/Buck_v_Bell.

45. Sewell, *The Political Gene*, 103.

46. *Ibid.*, 104.

47. Richard W. Schwartz, *John Harvey Kellogg: Pioneering Health Reformer* (Hagerstown, MD: Review and Herald Publishing Association, 2006), 207-210.

48. Caruana, *Darwin and Catholicism*, 125.

49. Hofstadter, *Social Darwinism*, 171.

50. *Ibid.*, 172.

51. *Ibid.*

52. *Ibid.*, 178-179.

53. Douglas Morgan, *Adventism and the American Republic: The Public Involvement of a Major Apocalyptic Movement* (Knoxville, TN: University of Tennessee Press, 2002), 26-29.

54. See Emmett K. VandeVere, "Years of Expansion: 1865-1885", in Gary Land, ed., *Adventism in America* (Grand Rapids, MI: W. B. Eerdmans, 1986), 66-94.

55. See the chapter "Blacks", in Malcolm Bull and Keith Lockhart: *Seeking a Sanctuary: Seventh-day Adventists and the American Dream* (San Francisco: Harper & Row, 1989), 193-206.

56. See Herbert E. Douglas, *Messenger of the Lord: The Prophetic Ministry of Ellen G. White* (Nampa, ID: Pacific Press Publishing Association, 1998), 491-2 and Ronald L. Numbers, *Darwinism Comes to America* (Cambridge, MA: Harvard University Press, 1998), 99-100.

57. Douglas, *Messenger of the Lord*, 214-218.

58. Weikart, *From Darwin to Hitler*, 3.

59. Hans-Günther Zmarzlik, "Der Sozialdarwinismus in Deutschland als Geschichtliches Problem," *Vierteljahrheft für Zeitgeschichte*, vol. 11 (1963), 3, 246-273, 270, quoted in Weikart, *From Darwin to Hitler*, 4.

60. Weikart, *From Darwin to Hitler*, 86.

61. See Edward Simon, "Another Side to the Evolution Problem," *Jewish Press* (Jan. 7, 1983), 248, quoted in Henry M. Morris, *History of Modern Creationism* (San Diego, CA: Master Book Publishers, 1984), 49.

62. Weikart, *From Darwin to Hitler*, 10.

63. Sewell, *The Political Gene*, 129.

64. Pichot, *The Pure Society*, 178.

65. Sewell, *The Political Gene*, 140.

66. *Ibid.*

67. *Church History* 65, no. 3 (September 1996), 425-440. This essay was republished in an adapted form in *Spectrum*, vol. 25, no. 9 (September 1996), 11-23, with the title "Nazi Race Hygiene and the Adventists: A German-born Adventist Scholar Recounts How Many Adventists Equated Health Reform With Racial Purity." The original article was reprinted as a chapter entitled "Nazi Race Hygiene and the Adventists", in Jacques B. Doukhan, ed., *Thinking in the Shadow of Hell: An Impact of the Holocaust on Theology and Jewish-Christian Relations* (Berrien Springs, MI: Andrews University Press, 2002), 169-190.

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68. Attempts by leaders to placate Nazi authorities do not mean that Adventist members did not suffer during the war. It has been estimated that out of some forty thousand members over three thousand were killed and some sixteen thousand lost their homes. See Richard W. Schwartz and Floyd Greenleaf, *Light Bearers: A History of the Seventh-day Adventist Church* (Nampa, ID: Pacific Press Publishing Association, 2000), 373-374.

69. Doukhan, ed., *Thinking in the Shadow of Hell*, 175.

70. *Ibid.*, 180.

71. Sewell, "Darwin and the Children of Evolution," www.timesonline.co.uk/tol/news/science/biology_evolution/6905259.ece.

72. Walter G. Jeffko, *Contemporary Ethical Issues: A Personalistic Perspective* (New York: Humanity Books, 1999), 190.

73. John C. Polkinghorne, "Beyond Darwin: The Human Difference," *Christian Century* 122, no. 23, n. 15 (2005), 26.

Chapter 17

THEISTIC EVOLUTION: IS IT A VALID OPTION?

Lael Caesar

The question of theistic evolution as a valid option contains theological implications for historic Christian belief and, in that context, for Adventist theology in particular. We begin by clarifying these three elements, which will provide the framework of our discussion.

Theistic Evolution

Theistic evolution (TE) is the view that in the history of the universe, evolutionary development, whether physical or biological, has involved divine intervention, however minimal. Given its variant forms a specific dictionary definition of TE may serve less well than Francis Collins's articulation of the six fundamental elements of his worldview.¹

1. The universe came into being, from nothing, about fourteen billion years ago.
2. However improbable, it appears "precisely tuned for life."
3. Over long ages, life mysteriously came to be and through evolution developed biological diversity and complexity.
4. No special supernatural intervention was needed once evolution got going.²
5. Humans are part of this process, sharing common ancestry with the great apes.
6. Human uniqueness is proved by our spiritual nature: universal consciousness of moral law and an equally universal longing for God.³

Historic Christian Belief

Historic Christian belief (HCB) is belief rooted in the centrality of Jesus and his teachings and believing as he himself believed, according to God's every word (Matt 4:4, 7, 10; Deut 8:3). For historic Christianity the Bible is the written, eternal Word of God (Isa 40:6-8) and Jesus is the Word made flesh (John 1:1-3, 14). From the Written Word, Christianity understands that the entire universe is the product of God's command (Heb 11:3), so that the phenomena of nature are a third book from which to learn of his power and purposes. Martin Hanna's work on reading God's three books is instructive. Hanna shows that Scripture's epistemological primacy, Jesus' ontological primacy and nature's chronological and contextual primacy all deserve our full respect.⁴ We live in the context of nature, and that context existed before Scripture was written and God Incarnate was revealed. Jesus is the supreme revelation of the Father, but the Bible is equally God's own statement of truth and of the life principles bequeathed to mankind.

Adventist Theology

Briefly stated, Adventist theology (AT) is only fully understood in the context of HCB itself, and is also derived only from the Bible, resulting in faith in the one Creator, Lord and Savior there revealed. AT recognizes God's unchanging character as expressed in Sinai's permanent and universal Ten Commandments. Though Christians in general hold this moral law in the highest regard, Seventh-day Adventists specifically remember the sacredness of the weekly seventh day, as a sign from the Creator God of both his creative and redemptive power (Ezek 20:12, 20), and as stressed in the fourth commandment.

Again, while HCB has always known God as a God of judgment, Adventists recognize in the biblical teaching of the sanctuary an outline of God's plan for the sanctification of his believing people and for ridding the universe of sin. Historic AT understands the three angels' messages of Revelation 14:6-12 as God's end-time judgment hour message pointing both backwards and forward – back to the Sabbath of Creation and to past universal judgment at the Flood, and forward to history's final climax and the last judgment. Belief in Christ's second and imminent return accounts for the "Adventist" emphasis in the name "Seventh-day Adventist."

It is to be stressed that Adventist "distinctive" theological emphases only have meaning in the context of HCB correctly understood and in the centrality of faith in the historic Jesus.

HCB Elaborated

Because HCB is fundamental and Adventism a specific denominational expression of basic Christianity, and because TE is now considered by some as a potential articulation of HCB, the latter requires some elaboration against which to judge the claims of TE (and Adventism). Following that elaboration, I focus on (a) the hermeneutics of TE, (b) TE's principal reason for being and (c) the dissonance between TE and selected Christian doctrines.

As already stated, the source and focus of Christian doctrine and behavior is Jesus Christ, presented in the Scriptures as God's anointed Son and humanity's Redeemer (1 Cor 2:2). TE appears to understand this: "Christianity, as its name suggests, is *primarily* about Christ."⁵ Jesus is also called Christ because he is believed to be God's Spirit-anointed one (χριστος), put to death on a cross, but raised on the third day in fulfillment of many Old Testament prophecies and now God's appointed judge of the living and the dead (Acts 10:38-43).

In just a few years, the followers of the resurrected Jesus who taught "the way of God in truth" (Matt 22:16; Mark 12:14)⁶ would themselves be so spoken of and would come to be called "Christian" (Acts 9:2; 11:26). The label was first attached to a group of people receiving the gospel in the Hellenic population in the Syrian city of Antioch, in the context of an unashamed, aggressive and sustained proclamation of the gospel (Acts 11:19-26).⁷ The book of Acts repeatedly reveals that the first Christians were devoted followers of Christ and that they unequivocally bore witness to his death and resurrection. This testimony, carried rapidly to the known world of the day, is the touchstone of authentic Christianity.

The focus of this chapter does not allow further elaboration on Christianity's beginnings. But no discussion of TE's significance for HCB is practical without awareness that historic Christianity is a humanly inconceivable body of belief, known only by supernatural revelation that invades, enlightens and transforms humanity. It is not a denial of human categories, but a demonstration of

divine power beyond human categories and expectations. And it is Christian most of all because it is rooted in its central figure, Jesus Christ, Lord of all. The significance of Christ for the reality of HCB is obtrusively demonstrated in HCB's earliest known formulation of its fundamental beliefs. The Apostles' Creed, first known at Rome c. AD 170 and subsequently developed over several centuries, asserts the creatorship of God and then dedicates the core of its confession and more than half of its entire statement to the person of Jesus Christ:

I believe in God, the Father almighty,
Creator of heaven and earth.
I believe in Jesus Christ, his only Son, our Lord,
He was conceived by the power of the Holy Spirit.
and born of the Virgin Mary.
He suffered under Pontius Pilate,
was crucified, died, and was buried.
He descended to the dead.
On the third day he rose again.
He ascended into heaven,
and is seated at the right hand of the Father.
He will come again to judge the living and the dead.
I believe in the Holy Spirit,
the holy catholic church,
the communion of saints,
the forgiveness of sins,
the resurrection of the body,
and the life everlasting, Amen.⁸

This centrality of Christ the Incarnate Word is paralleled by Christianity's regard for the Scriptures, the Written Word that validated his existence and testified to his life and teachings. In the Emmaus encounter recorded by Luke, Christ did not draw attention to his resurrected self, as well he might have done. Instead he reminded those two disciples of Scripture's testimony concerning his Messiahship (Luke 24:27). Shortly thereafter he explained, "These are my words which I spoke to you while I was still with you," insisting "all things which are written about Me in the Law of Moses and the Prophets and the Psalms must be fulfilled" (v. 44). For Jesus, the Old Testament was essentially about him.⁹ Contemporary Christianity cannot then be any less about him if it follows his lead in advocating the authority and the teaching of the Written Word.

TE—Some Hermeneutical Considerations

This chapter proceeds on the basis that the Bible is the unique and supreme document of the Christian faith. Its testimony, like Jesus' life, is internally consistent and its teachings, as already indicated, are the touchstone of Christian belief, the "canon" by which that belief is judged, as other writers in this book have demonstrated. How does TE relate to such a hermeneutical foundation?

TE as it has developed until now is seen, at least in one view, as a theistic reaction to a deistic theodicy expressed through evolution:

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Charles Darwin . . . presented what we might call the evolution theodicy, which distanced the Creator from natural evil just as Milton had distanced the Creator from moral evil. . . . Darwin's worldview was not revolutionary, but Darwin did find a way to describe his worldview using scientific terms. The idea that God must be aloof – separated from creation – now became respectable. With evolution, science's stamp of approval gave further credence to the idea of a distant God.¹⁰

TE and HCB both highly regard God's book of nature. Consistent with the Bible's claim that nature reveals God's glory (Psa 19:1; Rom 1:20), William Dembski states that "God gave humanity two primary sources of revelation about himself: the world that he created and the Scripture that he inspired."¹¹ As such TE sees itself as a defense against atheism, reacting against the thesis that no God would create the world that we know. The hermeneutics of TE attempt to reconcile the chaos of the evolutionary scenario to the order of the biblical revelation and the love of the biblical God. From a TE reading, the biblical text is said to establish a real deity as opposed to atheism; a God who is apart from nature over against pantheism; and one unique deity, instead of the polytheism of surrounding nations. TE contrasts with deism, in which God has had nothing to do with the universe since starting its clock billions of years ago, and with belief in a recent creation, where God created what we know as the biochemical order of life here on earth a few thousand years ago. The perceived objectivity of science dominates TE's hermeneutic, exercising definitive influence upon the interpretation of Scripture.

But TE's eagerness to identify with the supernatural while insisting on the reliability, even the priority, of human observation, does present an awkward scientific peculiarity. I state it here, with unequal treatment due to limitations of space, on three grounds. First, according to Stephen Jay Gould's dogma of sympathetic, interdigitating, but nonoverlapping magisteria (NOMA),¹² "mathematically orientated science is fully justified, independent, and autonomous. No theologian or churchman should put it in question with reference to a higher authority (God, Bible, pope, church)."¹³ Indeed, as Carl Raschke has put it, "perhaps the most formidable obstacle for theological thinking is the epistemological challenge posed by modern science."¹⁴ Science and its empirical questions are not to be confused with the human heart and its existential, moral and ethical concerns, to which the Bible, as a religious book, may be permitted to speak.

Unfortunately for those who attempt such category distinctions, the question of origins is, supremely, an existential one, or indeed a series of existential questions: Where have life and humans come from? Why and how are we here? Whither, if anywhere, are we bound? These are all existential questions. However scientific, the processes of analyzing the DNA molecule, describing what it does and of what it is composed, hardly answer the existential questions. And whereas the most complex molecule itself is evidently live matter – clearly a matter of life – religion must be within Gould's specified bounds to address its existence. DNA's connection with every living thing and person validates such inquiry. If not, mathematically orientated science has arrogated to itself the right to determine which points in life and which portions of life are to be treated as life questions. Atheistic evolution's reply that there is no purpose to DNA is something of an existential, or perhaps antiexistential, response. It may also be declared something of a manifest untruth, in that there is functional purpose to the molecule. In all of this the greatest irony must be the employment of reason to prove life's meaninglessness. TE's contrasting answer that God is involved rightly

perplexes both atheists and others whom TE would convince of its scientific credentials. Such is only one aspect of TE's scientific peculiarity.

A second aspect is the necessary but difficult question as to why at any given point in the process of evolutionary development divine intervention is legitimately allowed? Given TE's scientific dedication, how does it scientifically determine these points of divine activity, so essential to its basic thesis?¹⁵ In short, how can evolution be harmonized with divine intervention? Space limits our pursuit of the answer. But the question is sufficient in itself to underline the problem.

The third query may well be paramount. How could a paradigm, designed to explain all things on naturalistic grounds while retaining divine intervention, claim to eliminate the miraculous by demonstrating its naturalism? Such a conclusion demonstrates the human capacity for circular reasoning. *A priori* rejection of miraculous explanations guarantees that, in the end, no miraculous explanation will be accepted. It is difficult to identify which Christian doctrine or which essential element of HCB is enhanced by sympathetic association with this intellectually bewildering blend of dedication to both naturalistic objectivity and supernaturalism.

TE and the Doctrine of Scripture

We now begin a deeper discussion of TE's impact on HCB with an analysis of its relation to the doctrine of Scripture. According to Phillip Johnson, piety and knowledge remain separate for many today because of the belief that different ways of thinking govern religious and secular topics.¹⁶ Nonetheless, the evolutionary way of thinking is rooted in "an unacknowledged creation story,"¹⁷ a kind of materialist religion:

In the beginning were the particles and the impersonal laws of physics.
And the particles somehow became complex living stuff;
And the stuff imagined God;
But then discovered evolution.¹⁸

Both supporters and opponents of evolutionary theory agree that validating evolution requires either the rejection or the radical reinterpretation of Christian Scripture. This rare harmony may be examined on multiple grounds,¹⁹ of which we shall take up but one, namely, the argument for descent with modification. The "descent" argument, which we shall shortly address, despite some attempt to link it with Genesis 2:7, is still alien to Christian belief based on the Genesis account. As Aquinas knew, *ex nihilo* creation could not be philosophically demonstrated. It was, for him, as it must always be for the follower of Jesus Christ, a matter of faith in divine revelation.²⁰ Consider, then, how it contrasts with TE's faith in the Darwinian theory of life's origins.

Darwinian evolution (and neo-Darwinism) insists that development of life on earth has involved "slow and gradual modification [of life-forms] through descent and natural selection" rather than "the common view of the immutability of species."²¹ According to the theory, forms of more recent appearance are "more highly developed" than earlier ones as Darwin also wrote.²² Darwin's view exposes ignorance of the biblical teaching he feels constrained to challenge. Reference to "the common view of the immutability of species" addresses popular misunderstanding of the Bible's teaching on creation "after their kind."²³ Simply stated, and despite generations of evolutionists' attacks, the Bible does not teach the fixity of species, yet the false accusation continues. Nothing in the Bible supports

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either the evolutionary straw man of “fixity of species,” or a theory of universal creaturely descent with modification from a common ancestor. Darwin and the biblical record are incompatible.

But a second misconception, equally contrary to Scripture, conceals itself within Darwin’s “descent” argument. The confusion emerges in his definition of superiority:

the more recent forms must, on my theory, be higher than the more ancient; for each new species is formed by having had some advantage in the struggle for life over other and preceding forms. If under a nearly similar climate, the Eocene inhabitants of one quarter of the world were put into competition with inhabitants of the same or some other quarter, the Eocene fauna or flora would certainly be beaten and exterminated; as would a secondary fauna by an Eocene, and a Palaeozoic fauna by a secondary fauna.²⁴

The arrangement is, for Darwin, a “sensible” one, because it produces “more recent and victorious forms of life,” in comparison with the ancient and beaten forms.²⁵ It is difficult to conceive of a clearer contradiction of the spirit of Jesus Christ and of Christianity. Darwin’s predication of the superiority of the successfully violent may seem attractive logic to a “might-is-right mentality.” But it bears little resemblance to Christ himself. For Jesus it is the gentle, not the violent, who “shall inherit the earth” (Matt 5:5). The world he created, and the one to which man will ultimately be restored, is one that evolution cannot comprehend, where “wolf shall dwell with lamb” and little children play with vipers (Isa 11:6-9). TE departs from the Genesis record and displays a fundamental misunderstanding of the role and significance of the Bible when it argues for an objective human explanation of earth history as being compatible with the Genesis Creation account. Thinking that does not give Scripture priority is not authentically Christian, neither can it conceive of God’s original world. Nor are earth’s most gifted scholars capable of explaining by naturalistic means what happened when God created heaven and earth. TE is philosophically dislocated on both grounds.

With regard to the second of these grounds (naturalistic explanations), TE supports a notion of autonomy in the created universe. The farce of research paradigms that investigate nature while explicitly excluding supernatural explanations may be compared to that of the infant in search of her parents who determines, *a priori*, that they cannot be considered during the investigation. And with regard to the first (a proper attitude to the primacy of Scripture) Christian belief holds that the biblical record is the Maker’s own report on his product, necessary for the edification of mankind. Historical investigation has always given priority to inscriptions over other artifacts from antiquity. Graduate classes in archaeology taught me that discovering an inscription can guarantee an A grade. Excavated rocks and bones, whatever their chemical and biological information, are still mute. The Bible is God’s preserved and coherent “inscription.” It contains the unique record of his revelations in nature and in Jesus Christ. It testifies to being given by the divine guidance of the same God who made the world.

Bart Ehrman, New Testament scholar and unbeliever who gave up the faith of his youth because he “could no longer reconcile the claims of faith with the facts of life,”²⁶ today offers his own stern criticism of early Christian faith. His thesis is that Christianity only became a unified whole after divergent thinkers had been stifled by the winners in a struggle of ideas. The New Testament is the victorious enemy in a struggle against the democratic fairness of diversity of theory, opinion and position. As such, its witness is suspect, since “you can never rely on the enemy’s reports for a fair

and disinterested presentation.”²⁷ The argument is something of an inversion of Darwin’s theory on the superiority of the stronger. For Darwin, being successfully violent is being better. For Ehrman, Christianity’s alleged success through triumph over weaker enemies makes it untrustworthy. The claim, though not new, is awkward indeed, for it was the meek vulnerability of the Messiah and his followers before their opponents that led to his crucifixion and their martyrdom by the thousands in early Christian history. Their blood proved to be the seed of the church. Equally amazing, the sacred writings of God’s holy Book outlasted its enemies, so that “there are no other surviving documents that are as reliable and as historically close to Jesus and the early days of the church as the writings included in the NT.”²⁸ Johannes Geldenhuys explains how this came to be so:

“The fact, *as such* that Jesus possesses supreme divine authority . . . gives us the assurance that the Lord of all authority would have seen to it that . . . an adequate and completely reliable account of . . . His life and work was written and preserved for the ages to come.”²⁹

In summary, the revealed truth of these writings is that they are the supernatural revelation of supernatural realities.³⁰

If TE is to be seen as an authentic option for Christian belief, it must be sympathetic to the claims of Scripture with regard to its supernaturally revealed truths, including its position on origins. Anything less is an illogical dichotomy. But it is this very supernaturalism that TE resists with its own humanly calculated story of origins. Its scientific posture might be misunderstood to instruct us that sound biblical interpretation comes under the control of objective scientific research, being free to teach and mean only what falls within the pale of science’s latest finding. Contradictorily, TE allows the biblical Creation narrative to signify certain scientifically nondemonstrable things about God. At the same time, despite the careful detail of its narration, Genesis is not allowed to signify how God created, or how long Creation took. Against this position, a broad swath of secular biblical exegetes and philologists has insisted that the Genesis 1 account is intended as a literal reportage of an unrepeatable historical event.³¹ TE’s impact on the doctrine of Scripture controls God’s freedom to perform miracles. It explains away a literal Adam and Eve, created mature a few thousand years ago, instead authorizing humans to reason according to naturalistic paradigms to which reality must conform.

TE and the Doctrine of God

Even without understanding the Trinitarian mystery the God of the Bible overwhelms TE’s haphazard little mechanistic deity to whom, as Christopher Hitchens scathingly acknowledges, TE would offer its worship:

Those who have yielded, not without struggle, to the overwhelming evidence of evolution are now trying to award themselves a medal for their own acceptance of defeat. The very magnificence and variety of the process, they now wish to say, argues for a directing and originating mind. In this way they choose to make a fumbling fool of their pretended god. And make him out to be a tinkerer, an approximator, and a blunderer, who took eons of time to fashion a few serviceable figures and heaped up a junkyard of scrap and failure meanwhile. Have they no more respect for the deity than that?³²

By contrast with TE's bungling death generator, Scripture's omnipotent God generates life without need for either tools or raw material. Even his use of Creation's one week proves that his creative power depends no more on time than it does on matter or accident. He surely has no need for death in order to bring life into being. He does not need anything. He gives to all life and breath and everything (Acts 17:25).

The Exodus story provides an outstanding example of the miraculous power of the sovereign God first seen at creation. Commissioned to confront Pharaoh and free God's people, Moses is endowed with miracle-working power: "When you go back to Egypt," the Lord instructs, "see that you perform before Pharaoh all the wonders [*môphetîm*] which I have put in your power" (Exod 4:21). Assuring him of the divine omnipotence, the Lord illustrates his power and his transcendence: "What is that in your hand?" God asks. "A staff," answers Moses (v. 2). "Then he said [*wayyô'mer*]: Throw it on the ground. So he threw it on the ground, and it became [*wayehî*] a serpent" (v. 3). The grammatical and syntactical elements of this miracle story appear together only three times in the Old Testament. First is the Creation story, Genesis 1:3, 6, and so on with its obtrusive verbal roots "say/command" (*'amar*), and "be/become" (*hayah*), as God speaks and matter and life come to exist. The exegetical value of comparing Exodus 4:2-3 and Genesis 1:3ff., lies in the rarity of these verbal combinations in the Hebrew Bible. Though their roots (*'amar* and *hayah*) and forms (*wayyô'mer*, *wayehî*) are ubiquitous in the Old Testament,³³ in no passages besides these three in the Hebrew Bible – the third being Psalm 33 – are they presented in this narrative relationship. It is scarcely coincidental that all three passages report the same activity, as stated by the psalmist: "He spoke, and it was done; He commanded, and it stood fast" (Psa 33:9).

Apart from their common theme, vocabulary and syntactic sequence, the Hebrew of Psalm 33:9 exhibits a rather conspicuously provocative relationship to the Genesis Creation report. Using the same verbs Psalm 33 testifies again to the manner of creation. Here, the combination of the terms is provocative because of what the writer omits. For whereas in Genesis the verb *'amar* introduces divine speech "and God said, 'let the earth sprout vegetation . . .'" (v. 11), with the psalmist it introduces nothing, at least not explicitly. Instead, despite the versions' rendering of Psalm 33:9 as "he spoke," what the psalmist actually uses is the Genesis Creation word "said," as follows: "He said, and it was."³⁴ Given the readers' assumed familiarity with Torah, the psalmist deems it unnecessary to say more, remaining enigmatically cryptic.

The Bible sustains these basic truths on the doctrine of creation and the doctrine of God to the very end. To understand that God brought the world into existence simply by speaking (Heb 11:2) gives both the facts about matter's origins and the awesome truth about the originator of matter. Today's science can no more fathom this God, nor account for the wonders of flora and fauna he speaks into instantaneous existence, than could the magic arts of Pharaoh's courtiers, forced to exclaim before Moses' miracles, "This is the finger of God" (Exod 8:19). If TE is actually Christian, it must be a new Christianity, because no such God as it proposes – the creation of the latest scientific consensus – was part of historic Christianity.

TE's downgrading of the God revealed in Scripture is only half addressed until we are confronted by God's self-characterization. For above and beyond his power to create and sustain suns and planets by his word (Isa 40:12, 15, 26; Heb 1:3) and to predict the end from the beginning (Isa 41:21-24; 43:9; 46:9-10), it is the incomparable greatness of his love by which he asks us to define

him. “God is love” (1 John 4:8), is the fundamental and immutable Judeo-Christian definition of the God who creates and sustains, inconceivable in the context of the perpetual violence that pervades TE (2 Cor 13:14).³⁵

“Whoever does not love does not know God,” John insists, because “God is love” (1 John 4:8; James 1:17). It is by compassion and graciousness that he defines himself when Moses pleads for a revelation (Exod 34:6). We also know him most clearly in the love that was willing to sacrifice the Godhead’s eternal unity for the sake of a rebellious planet (Rom 5:8). TE would convert this self-denying self-sacrifice into Darwin’s conception of superiority – the ability to survive by overcoming all rivals for comfort, space or food, however necessary. It offers a god whose first option is misery, trampling the weak and violating the vulnerable for the profit of those who triumph in the struggle for survival as well, supposedly, as those wiped out in the process. This redefinition is the reduction to absurdity of the biblical God, in reality identifying him with the work of his avowed and formidable enemy, himself excluded from all analysis and thus left free to continue wreaking spiritual and physical havoc in God’s world (Rev 12:9; 1 Pet 5:7; Matt 13:24-30). We turn now to a discussion of this enemy.

TE—The Excluded Enemy: TE’s Missing Link

We have seen that although TE declares its commitment to science, it vigorously proclaims the message of Scripture that nature is God’s lesson book. Affirming both evolution and Scripture, Dembski’s kairological reading of Genesis 1-3 does double duty as a validation of long ages of coming into being and of the Sabbath of creation:

[I]f the days of creation are kairological, referring to basic divisions in the divine order of creation, then Sabbath observance reflects a fundamental truth about the creation of the world. . . . Sabbath observance enables us, who are made in the image of God, to understand the proper place of human work in light of God’s work.³⁶

Dembski’s theory is a further exposé of TE’s scientific and theological confusion. His “kairological reading” implicates humanity even before humanity emerges, because the omniscient God knows what humans will do and for the sake of justice perverts the world to teach humans the defectiveness that is the wages of sin:

God does not merely allow personal evils . . . to run their course *subsequent* to the Fall. In addition, God allows natural evils . . . to run their course *prior* to the Fall. Thus, God himself wills the disordering of creation, *making it defective on purpose*.³⁷

Understanding the Fall ceases to matter when consequences precede their origin: “the effects of the Fall can be retroactive.”³⁸ Clarifying Dembski’s understanding of the Fall does nothing to improve his reasoning, since it involves God testing creaturely loyalty in some perfect place – “a segregated area that gives no evidence of natural evil.”³⁹ TE’s search for moral justification thus brings us back to the place where we started – the Bible’s testimony about the original physical environment – namely, a perfect creation. TE’s recognition of the logical need for testing loyalty in a perfect place, results in its distorted alternative to the biblical revelation.

However philosophically absorbing, there is nothing scientific about Dembski’s fantastic conception. Its hope of finding ultimate moral meaning in the study of rocks is doomed by its

own most significant presuppositions: (1) the infallibility of objective human observation and (2) naturalistic interpretation of supernatural realities. TE's confusion arises from its absolute faith in human objectivity and its attribution of all supernatural activity to one unique, supernatural agent, while overlooking the strong biblical witness to the existence of a malevolent supernatural agent in the person of Satan. These presuppositions are apparent both within evolution itself and beyond. Darwin strove to exonerate the deity by distancing the supernatural from suffering flora and fauna. Arbitrary attribution, to a single supernatural being, of both grace and malevolence, is a universal phenomenon, not peculiar to Christian evolutionists. In Darwin's case it suggests that, on the one hand, he may deserve greater admiration than he has sometimes earned from those Christian believers who, like him, wish to absolve their deity of blame for the carnage found in the fossil record. At the same time, the atheistic community must be astonished that any Christian should now insist that the God of the Bible is credited with being the direct and continuous agent of earth's historic mayhem.

The critical distinction between biblical and other explanations for dissonance in the human sphere, whether moral or physical, whether Darwinian, from TE or across world religions, appears to relate directly to the existence of the biblical Satan, the great adversary of God. Satan's activities betray his opposition to the God who is love (1 John 4:8) and to those whom God explicitly wishes to protect (e.g., Job: Job 1; 2; Joshua the high priest: Zech 3:1-5). Understanding the biblical answer to theodicy is impossible while ignoring Satan. His operations involve considerable deception – including anonymity, misplaced blame (whether to Sabeans, Chaldeans or God – Job 1) and imposture (speaking of himself in terms belonging to God).⁴⁰ Beyond all this, the narrative implication of Job 1 and 2 is one of callously destructive determination.⁴¹ Having wiped out Job's camels, sheep, oxen, donkeys and children, he returns to God to accuse him of being hyperprotective of Job (Job 1:3-2:3). Inexplicably, but to Satan's credit it must be said, TE would attribute his power and cruelty to the God who would protect his creation from Satan's vicious hand.

The book of Revelation calls him the "ancient serpent," thus identifying him as the deceiver in the Garden of Paradise and marking out the contours of a long continuous struggle that began in Eden and does not end until earth's history is complete. The conflict thus clearly predates Eden, which is the point at which Satan wins humans to his camp by persuading them to rebel against their Creator (Gen 3:1-6). His assaults on Jesus at the very beginning of his earthly ministry (Matt 4:1-11; Luke 4:1-13), and the cosmic dimensions of his opposition made explicit in Revelation 12,⁴² show Satan defining himself in action as the unrelenting enemy of God's Son. Jesus knows him as such (John 12:31) and rejoices, as his followers should, at his undoing (Luke 10:18). The Bible's testimony on Satan is that his malevolence originated with himself (Isa 14:12-14), that he is the cause of death to humans and evil on earth (Gen 3) and that he is destined for oblivion when God, at the end of earth's history, purifies the world from the Satanic stain of sin.⁴³ Here is the eschatological dimension of the age-long conflict between God and Satan.

The *sine qua non* for any biblically based Christian theodicy is full recognition of the existence of Satan as the avowed enemy of God and all that is good, and to the biblical evidence of his nature and intentions. Such recognition distinguishes his instigation and perpetration of evil from God's gracious activity, while granting to the sovereign Lord of all the right to administer judgment and justice in the universe (Gen 18:25; Dan 7:9-14, 17-27). The Bible's real and personal Satan is TE's and Darwin's missing link that has led to generations of frustration about the origins of evil, and

the illogical and demonic misattribution of that evil to God as its source. It is the link that connects the perfect beginning in Genesis 1-2 with the global flood of Genesis 6-8. It is the logical link between the God of Eden's perfection and the God of justice at the Flood, Sodom and Gomorrah, the Amorite destruction, the Israelite exile and Revelation's final lake of fire (20:12-15). God reveals through these acts his resolve to destroy Satan and the evil Satan succeeded in establishing on earth. As Satanic rebellion marred the purity of heaven, so also it blighted the beauty of creation, and as heaven's holiness could not be maintained without his expulsion (Rev 12:7-10), so earth's pristine perfection cannot be recovered without his elimination. Evolution in any form, including theistic evolution, has no logical place for such a Satan, or a cosmic conflict between him and Christ and a final eschatological triumph that restores the universe to its original perfection.

TE and the Doctrine of Sin

Given TE's exclusion of Satan, it is not clear why TE's supposed "objectivity" allows for the existence of sin, though human behavior certainly provides ample evidence for its recognition. TE is still evolution, even though dressed in a different garb, and the evolutionary and biblical paradigms consistently run contrary to each other. The biblical teaching of a perfect beginning, tragic fall and ultimate restoration through redemption in Christ contrasts directly and thoroughly with TE's concept of a fourteen-billion-year-old explosion progressively yielding higher and higher forms of life, climaxing with the human species derived through an apelike ancestry. Richard Rice declares sin to be one of the most profound biblical concepts, more clearly evidenced than any other Christian idea, and supplying the most practical evidence of all Christian belief.⁴⁴ On the other hand, for TE sin mysteriously "came into the world at a specific point in human history, impacting all human choice and environment."⁴⁵ In HCB sin arose by deliberate human choice and its intrusion into God's perfect world has resulted in human suffering and death (Rom 5:12) as God said in Eden would be the case (Gen 2:15-17). By contrast, TE argues that death is more natural to earth's existence than humanity, having preceded us by billions of years. John Haught, a prominent TE spokesman, says "the need for a saviour is in no way diminished by our recent evolutionary knowledge."⁴⁶ Yet in both HCB and AT the Fall and consequent sin in human experience are necessary antecedents for a Savior and the fact that from Genesis 3:15 onwards his coming was predicted.

The need for that Savior and the atonement he provides are no less baffling than TE's belief in sin. How, we may ask, in the constant progress towards the better does the need for a Savior arise? TE's speculation that God influenced selected animals within the evolutionary process toward self-conscious intelligence and obedience to his will is a sad attempt to moralize an essentially brutal theory. Allegedly, it is human ingratitude at God's kindness that made salvation necessary, though this still fails to explain the Bible's depiction of salvation as divine restoration to humanity's original state of bliss (Rev 21:1-5; 22:1-5; cf. Isa 11:6-9; 35:1-10). TE knows of no original bliss to which we may return. A diminished Creation doctrine both diminishes human beings and undermines the dignity of the atonement, allowing as it does for speculation even on the possible evolutionary development of Jesus Christ himself,⁴⁷ and calling into serious question the very need for his atoning work at all. Both Savior and salvation are necessitated by human sin – such is the historic understanding of both HCB and AT. On the other hand, TE's view of sin and salvation must be consistent with TE's science, making secular scholarship, in the end, the arbiter of divinely revealed truth and human hope.

TE's philosophizing cannot change the biblical truth that death is a curse (Gen 2:17; 3:3, 17-19). By announcing the gospel at the scene of the first sin (Gen 3:15), God sought to teach humans their need and make them aware of his gracious intention. The troubles they will now experience signify, not his abandonment, but the tragic consequences of their error. Nevertheless, they may know from the outset what the end result will be. By bearing sin's curse in himself, he will crush Satan's head under his heel, destroying his power forever (Heb 2:15) and making Eden possible again. But whereas biblical promises of salvation and restoration make no sense in evolutionary theory, TE must disrupt the logic with its insertion of the Christian idea of sin that makes salvation necessary. The triumphant climax of Revelation 21 and 22 that completes history's cycle remains inaccessible to TE, for it cannot logically aspire to a restoration of paradise while denying the original Paradise in which sin is the reason for nature's need of restoration.

TE and Salvation as New Creation

Among other things TE claims that creation "is a *secondary* doctrine for Christians."⁴⁸ Such a notion would be entirely incomprehensible to New Testament Christians, for its heretical claim constitutes a direct attack on the Christian doctrine of salvation. The Christ of early Christianity derives his redemptive credentials precisely from his authority as the eternal Creator God. One of the crucial New Testament declarations on this relationship is Colossians 1:13-22, where the doctrine of Christ as Creator is pointedly stated between two equally clear affirmations of his redemptive work of reconciliation:

Verses 13-14: He [the Father] has delivered us from the power of darkness and conveyed us into the kingdom of the Son of His love, *in whom we have redemption through His blood* (NKJV, emphasis added).

Verses 15-16: He is the image of the invisible God. . . . By Him all things were created that are in heaven and that are on earth. . . . All things were created through Him and for Him.

Verses 19-22: It pleased the Father . . . *by Him to reconcile all things to Himself . . . having made peace through the blood of His cross*. And you, who once were alienated . . . *yet now has He reconciled in the body of His flesh through death* (NKJV, emphasis added).

This entire passage from Colossians is a continuous whole, arguing that it is the Creator who becomes the Redeemer, and hence that redemption cannot be divorced from creation. Christian theology is unambiguous on the question of this critical linkage between creation and redemption, between human salvation and creation's Christ.

Church father Athanasius, repeatedly banished for his defense of Christ's full deity, explains to his young convert Macarius: "The renewal of creation has been wrought by the Self-same Word Who made it in the beginning. There is thus no inconsistency between creation and salvation."⁴⁹ J. van Genderen and W. H. Velema pronounce that "in the midst of the history of creation in Genesis 1 and 2 we encounter Jesus Christ, and therefore creation is in essence salvation history."⁵⁰ If creation is

secondary, then the re-creation that is salvation should not matter as much as it does to God. But as Athanasius further explained, Christ needed to come to earth to perform his redeeming work because

He saw how unseemly it was that the very things of which He Himself was the Artificer should be disappearing. . . . He, the Mighty One, the Artificer of all, Himself prepared [a] body. . . surrendered His body to death instead of all, and offered it to the Father.⁵¹

The Incarnation is history's incomparable disclosure of the God who is love (John 14:9). The biblical basis for that unfathomable mystery is the crisis in the creation. It is because the Artificer of all observes that decay has set in to mar his works that were once perfect in every particular,⁵² that he must come to reverse the tragedy by the sacrifice of himself. It is by this sacrifice that restoration may be effected. This great mystery, proclaimed by the early Christians (1 Tim 3:16),⁵³ was foolishness to the Greeks (1 Cor 1:18-23) and a confounding obstacle to the Jews (v. 23).⁵⁴ The idea violates the most basic conceptions of human understanding and modern science. It requires the Creator of matter to become created matter and the source of life of the entire universe to die. Thus, creation and salvation are inextricably linked to all other concepts of Christian doctrine in the biblical account of human existence and destiny.

It is not surprising then that the New Testament repeatedly emphasizes that no work of his is more crucial than the work of restoration, a fact of major significance to the entire universe. The inhabitants of heaven bow before the victorious Lamb and sing a new song: "Worthy are You to take the book and to break its seals; for You were slain, and purchased for God with Your blood men from every tribe and tongue and people and nation" (Rev 5:9). Countless millions of angels join in the emotional outpouring (vv. 11-12) because the Lamb, who is worthy of adoration, "was slain." His death is the cause for worship and rejoicing. But it has already been asserted that the enthroned Lamb was originally the Creator (4:11). Similarly, Paul states that it was "creation" that waited in hope for "redemption" and to be "delivered from the bondage of corruption" (Rom 8:19-22). To say in view of all this that creation is secondary for Christians is to separate what the New Testament teaches and what God himself has joined. Thoughtful readers might conclude that TE's impact on the basic Christian doctrines of sin and salvation are among its most pernicious consequences.

TE and Adventist Theology: A Brief Summary

TE's interpretations of Scripture hold significant implications for Adventist theology, going to the very core of our name and identity. Collins well expresses the true nature of the issue and the root of TE's dilemma when he acknowledges, "When I became a believer at 27 . . . I couldn't take Genesis literally because I had come to the scientific worldview before I came to the spiritual worldview."⁵⁵ Collins would be no authority on genetics if he were that dismissive of its principal texts. He and TE are entirely correct in believing that nature and God, properly understood, cannot contradict each other. Where they have seriously gone astray is in understanding the relationship to each other of God's two books of nature and Scripture. Theistic evolutionary thought has distorted that balance, giving primacy to the one that should be given to the other and thereby effectively giving erring human beings veto power over God's revelation in Scripture and in Jesus.

Seventh-day Adventism, firmly anchored from the beginning in the ultimate authority of

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God's Word, was brought into being by God partly as a specific response to the challenge of that evolutionary thinking, which is so diametrically opposed to the teachings of the Bible. This conviction derives from the implications of Revelation 12:17 and 14:6-12, seminal texts in Adventist self-understanding, that implicitly or explicitly emphasize once again the importance of recognizing God as Creator. The urgent cry of the first of Revelation 14's three angels, heard around the world since the mid-nineteenth century and thus broadly corresponding in time with the appearance of Darwinian thought, responds to evolutionary claims by reiterating the statements of Scripture's opening declaration. The judgment here announced is the judgment of the God "who made the heaven and the earth and sea and springs of waters" (Rev 14:7), Creation appearing as the foundation of both gospel and judgment. The allusion to both Creation's Sabbath and the global judgment of the Noachian flood may be heard as a warning against repeating the antediluvian tragedy as well as a call to stand firm in the biblical tradition of Creation as opposed to any form of evolutionary dilution or deviation.

We cite here two paragraphs from a recent publication entitled *Should Christians Embrace Evolution?* Readers will notice the focus on theistic evolution, as in conclusion the authors state:

Having considered some of the key questions that arise from seeking to reconcile evolution with Christianity, we must face the question: Should Christians embrace evolution? Our answer is a resounding "no" – absolutely not. Theistic evolutionists have failed to demonstrate a theology consistent with the supremacy of Scripture. They have reinterpreted Scripture in order to harmonize it with current understandings of the evolutionary paradigm. . . .

Traditional Christian theology explains suffering, decay and death by reference to the fall, believing that the good creation of God was damaged and that death and decay entered as a consequence. God sent his Son to redeem us and to restore us to a place where everything in heaven and earth will be together, in harmony, and under the headship of Christ. It makes the sin of man responsible for the dysfunction in our world. A theology that denies a significant fall and denies that physical death is a result of mankind's sin makes God responsible for the suffering in our world. That is no little or light matter, and in the absence of a clear theology that explains this position and accords with Scripture it would be outrageous to embrace evolution.⁵⁶

So much for HCB in general. But what of Adventist identity and Adventist theology? Quite evidently, they cannot be reasonably or exegetically reconciled with theistic evolutionary thought. Adventism that will be faithful to its prophetic calling must resist the unbiblical and essentially humanistic assertions of TE. It must, with charity and due recognition of views sincerely held, expose TE's confused theology by declaring the light of the everlasting gospel of Revelation 14:6, rooted as it clearly is in the Genesis Creation account and reflecting biblical theology as a whole. We do this by honest exegesis, proclamation and worshiping the Creator God according to his explicit requirement. Honoring the Creator's Lordship over all, we share with all creation the sacredness of his Sabbath rest, because he set it apart as the memorial of his original creative work, endowing it with sanctifying significance in witness to his saving, re-creative work in Christ. The eschatological dimension is that, in order to end the cosmic conflict against the archenemy and to return humanity

and the planet to original bliss, he sacrificed himself “once for all” with the intention of returning again to bring to a triumphant conclusion the work of redemption and restoration. Protology and eschatology can never be disunited in any theology that is truly biblical and in Adventist theology in particular.

Conclusion

The first of Collins’s six statements with which we began demands a response from the Christian believer because evolutionary time continues unbroken from the big bang to at least 850 million years of life on this planet.⁵⁷ Though the Bible does not speak specifically to the age of the universe, it points to life on earth as being only a few thousand years old. Collins’s second statement would enjoy wide agreement and draw enthusiastic support from Christian believers who find it no surprise that the universe recommends itself as organized for life. The testimony of Scripture is that God formed the earth to be inhabited (Isa 45:18)⁵⁸ and the Genesis Creation account makes it abundantly clear that the purpose for creating the earth (in specific relationship to other cosmic bodies, Gen 1:14-18) was to sustain life. Statements three to five, however, can only be understood and accepted in context of the evolutionary presuppositions that guide Collins’s thinking and the thinking of like-minded theistic evolutionists. For TE’s proponents, “Science is the only legitimate way to investigate the natural world.”⁵⁹ Their study, within that frame of interpretation, leads to the conviction that life on earth can only be explained in terms of long, slow, graduated processes leading from simple to complex forms: “Evolution, as a mechanism, can be and must be true.”⁶⁰ But as we have seen, in this and other chapters in this book, it is impossible to reconcile this view with any consistent reading of Scripture.

Collins’s sixth statement is admirably optimistic, but flawed and suspect on two grounds. His belief in the universal consciousness of moral law and a universal longing for God are both seriously open to question as the effects of evolutionary thinking shape the consciousness of successive generations worldwide and permeate society at all levels. After two centuries of false evolutionary optimism we may justifiably ask, Where is the better society promised, indeed required, by evolution? Collins’s optimism for universal human consciousness of moral law and universal longing for God do not seem at all well founded in today’s world. His conviction is the other side of J. L. Mackie’s coin, in which evil is only problematic “for someone who believes that there is a God who is both omnipotent and wholly good.”⁶¹ In short, TE’s evolutionary-based theology is clearly built on shifting sand rather than on the sure foundation of God’s Word.

Meanwhile, Bible-based Christianity, HCB and AT alike must be constantly alert to living and proclaiming every word that has come by divine revelation (Deut 8:3; Matt 4:4). Believers must beware lest they be taken captive by persuasive but misconceived philosophy, “according to the tradition of men, according to the elementary principles of the world, rather than according to Christ” (Col 2:8). The Christian will not avoid or evade the scandal of the cross (1 Cor 1:23-24) or “naive” belief in Satan and a cosmic controversy. The condemnation of TE is that it is but one more shrewd attempt to distort revelation by human logic. In some minds, it may represent a step beyond other major historic Christian heresies. The Docetism and Arianism of the church’s past constituted failures to take hold properly of the challenging biblical revelation concerning Christ with which theologians grappled. Those heresies were failures in an intellectual struggle with

revelation in which so-called human logic prevailed over revelation itself. By contrast TE depends upon materialistic presuppositions by which Scripture is to be interpreted and to which Christians are then required to subscribe. TE affects all that we know by special revelation from creation to redemption and re-creation, with distorting effects reaching back beyond the Garden of Eden to Satanic rebellion against the Creator.

We close by referring to one more study on the theological and exegetical problems posed by theistic evolution. In his book, *Did God Use Evolution?* Dr. Werner Gitt points out ten dangers "inherent in theistic evolution" and examines in detail twenty objections to the theory, concluding, "There is an unbridgeable chasm between theistic evolution and the biblical doctrine of creation" and stating, "Proponents of theistic evolution relegate the Bible to a subordinate role."⁶² In the final chapter, "The Consequences of Theistic Evolution," Dr. Gitt reminds us that theistic evolution undermines the traditional way in which the Bible has been understood by Christians for centuries and warns, "Adherence to the views of theistic evolution leads to the abandonment of central biblical teachings."⁶³ We have attempted to show the accuracy of this statement in some detail in this chapter. For all who regard the Bible as God's revealed Word, it is perhaps the most serious theological challenge of our time.

NOTES AND REFERENCES

1. Francis Collins, *The Language of God* (New York: Free Press, 2006), finds his philosophical position "enormously satisfying," 199. But he would like to escape some of the negative implications and public resistance the term "TE" currently involves by changing its name to BioLogos. " 'BioLogos' expresses the belief that God is the source of all life and that life expresses the will of God," 203.
2. Collins's apparently minimalist position on divine intervention contrasts with other views that consider God as intervening more frequently. Any of those views is accommodated in this discussion, since it is the claim of divine intervention, rather than the degree or frequency of that intervention, that makes evolution theistic.
3. *Ibid.*, 200. J. Barton Payne defines TE as "accepting, as a naturally explainable development, the bodily (though not spiritual) evolution of mankind." "Theistic Evolution and the Hebrew of Gen 1-2," *Bulletin of the Evangelical Theological Society* 8 (1965), 85. This exclusive focus on humanity probably assumes, rather than disputes, other aspects of Collins's definition.
4. Martin Frederick Hanna, *The Cosmic Christ of Scripture* (Martin Frederick Hanna, 2006), 129.
5. Karl W. Giberson, foreword by Francis S. Collins, *Saving Darwin: How to Be a Christian and Believe in Evolution* (HarperOne, 2008), 11.
6. Unless otherwise noted, all scripture references are from the NASB.
7. We may draw two notes of support from the apology of Aristides, the earliest known postbiblical defender of Christianity: one about the power of the gospel, and the other about the application of the name "Christian." Concerning the power of gospel truth, Aristides writes of the Incarnation: "This is taught in the gospel . . . ; and you also if you will read therein may perceive the power which belongs to it." As to the application of the name: "Thereupon these twelve disciples went forth throughout the known parts of the world, and kept showing his greatness with all modesty and uprightness. And hence also those of the present day [c. AD 125-47] who believe that preaching are called Christians." "The Apology of Aristides the Philosopher," in William Edgar and K. Scott Oliphint, eds., *Christian Apologetics Past and Present: A Primary Source Reader*, vol. 1: to 1500 (Wheaton, IL: Crossway, 2009), 31.
8. From Roger E. Olson, *The Story of Christian Theology* (Downers Grove, IL: IVP, 1999), 129-130. On the creed's earliest location and dating, see Kurt Aland, *A History of Christianity*, trans. James L. Schaff (Philadelphia, PA: Fortress, 1985), vol 1: *From the Beginnings to the Threshold of the Reformation*, 54, 117.
9. The third section of the Hebrew Bible, properly named "Writings," is here labeled "Psalms," probably because the book of 150 psalms is its first and major item, 41 percent of its total in terms of chapter divisions.
10. Cornelius G. Hunter, *Darwin's God* (Grand Rapids, MI: Brazos Press, 2001), 145.
11. William A. Dembski, *The End of Christianity: Finding a Good God in an Evil World* (Nashville, TN: B & H Publishing Group, 2009), 71.
12. Stephen Jay Gould, "Non-overlapping Magisteria," *Natural History* 106/2 (March 1997), 18.
13. Hans Kung, *The Beginning of All Things: Science and Religion*, trans. John Bowden (Grand Rapids, MI and Cambridge, UK: Eerdmans, 2007), 30.
14. Carl Raschke, *Theological Thinking: An Inquiry* (Atlanta, GA: Scholars Press, 1988), 29; quoted in Hanna, *The Cosmic Christ*, 99.
15. "Progressive creation" [PC, or "Old Earth Creation" – OEC] is sometimes thought of as distinct from TE [or EC – "Evolutionary

Creation"] because of the latter's uniformitarianism. But the distinction is hardly critical to our thesis. TE's faith is that God's continuous work effects the changes from trilobite to modern organism. By contrast, PC's faith includes occasional fiat creations throughout the planet's history. In the long run, a debate among theists between PC and TE is hardly distinguishable from that between nontheists on punctuated equilibrium and phyletic gradualism. Scientific evolutionists still demand of believers in both TE and PC some scientific justification for the introduction of God at any point(s) in the evolutionary process and equally, some demonstration that the so-called divine intervention was indeed divine. In all this, the increasing use of "creationist" titles (PC, OEC, EC) may be a rhetorical twist worthy of its own attention.

16. Phillip Johnson, *The Right Questions: Truth, Meaning & Public Debate* (Downers Grove, IL: IVP, 2002), 63.

17. *Ibid.*

18. *Ibid.*, 63-64.

19. The following six are merely illustrative of the total incompatibility between Darwinian evolution and the Christian doctrine of God's revelation in Scripture: (1) descent with modification – here addressed; (2) Darwin's "struggle for existence" (see his chapters III and IV: "Struggle for Existence," 114-129 and "Natural Selection," 130-172) vs. Genesis' perfect creation; (3) Darwin's "struggle for existence" vs. the categorical biblical position that God is love; (4) Darwin's survival of the fittest (see his chapter IV) vs. God's meekness and vulnerability; (5) Darwin's survival of the fittest (see his chapter V, "Laws of Variation," 173-204), vs. God's commitment to the weakest; (6) the relativism and moral flexibility of Darwinian ethics vs. the Bible's testimony to moral absolutes.

20. Olson, *Christian Theology*, 339.

21. Charles Darwin, *The Origin of Species*, edited with introduction by J. W. Burrow (Penguin Books, 1985), 317. See ch. 10, "On the Geologic Succession of Organic Beings," 317-343.

22. *Ibid.*, 336.

23. *ʾmīnō, ʾmīnēhū, ʾmīnāh*, Genesis 1:11, 12 [2x], 21 [2x], 24 [2x], 25 [3x] – 10 times in all through Genesis 1.

24. Darwin, *Origin of Species*, 336-337.

25. *Ibid.*, 337. Evolutionists contradict themselves when they quibble about this definition of "superiority" while still holding to Darwin's "sensible" arrangement.

26. Bart Ehrman, *God's Problem: How the Bible Fails to Answer Our Most Important Question – Why We Suffer* (New York, NY: HarperCollins, 2008), 3.

27. Bart D. Ehrman, *Lost Christianities: The Battles for Scripture and the Faiths We Never Knew* (Oxford: Oxford University Press, 2003), 104, quoted in Andreas J. Kostenberger and Michael J. Kruger, *The Heresy of Orthodoxy* (Wheaton: Crossway, 2010), 74.

28. Kostenberger and Kruger, *Heresy*, 73-74.

29. Johannes N. Geldenhuys, *Supreme Authority: The Authority of the Lord, His Apostles and the New Testament* (Grand Rapids, MI: Eerdmans, 1953), 43, quoted in Maurice M. Wiles, *The Making of Christian Doctrine: A Study in the Principles of Early Doctrinal Development* (London: Cambridge University Press, 1967), 11.

30. According to Maier, the multiple stages of divine supervision include, by way of example (1) preservation of Daniel's writings, (2) "preservation of national archives," (3) "the discerning use of both in

a reflected literary work," and (4) "the subsequent rise of the book of Daniel in its entirety. Not until the book's completion has inspiration attained its goal," 134, so "it contradicts the character of the entire inspired process to detach individual elements from it or to attempt to qualify such elements as 'human,'" 136. For further discussion on the reliability of the text of the Holy Scriptures, see chapters 7-10: "The Inspiration of Scripture," 97-147; "The Canon," 149-163; "The Authority of Scripture," 165-86 and "The Unity of Scripture," 187-208. See also George W. Reid, ed., *Understanding Scripture: An Adventist Approach*, Biblical Research Institute Studies, vol. 1 (Biblical Research Institute, 2005); Gerhard F. Hasel, *Understanding the Living Word of God* (Mountain View, CA: Pacific Press, 1980).

31. Among whom Gerhard Hasel lists Gerhard von Rad, James Barr, and Hermann Gunkel. See Gerhard Hasel, "The 'Days' of Creation in Genesis 1," in John Templeton Baldwin, ed., *Creation, Catastrophe, and Calvary* (Hagerstown, MD: Review and Herald, 2000), 54.

32. Christopher Hitchens, *God Is Not Great: How Religion Poisons Everything* (New York: Hachette Book Group, 2009), 85.

33. The root *'amar* appears 5298 times; the specific form *wayyō'mer* occurs 2081 times; the root *hayah* is present 3548 times; the specific form *wayehi* (Qal preterite *waw* 3ms, as opposed to Qal impf 3ms + *waw* conjunction) occurs 776 times.

34. The standard biblical Hebrew verb for "speak" is *dabar*, occurring more than 1100 times, *TWOT*, s.v. *dabar*.

35. TE's Collins, too, believes that God is of "infinite love and benevolence," Collins, *Language of God*, 272, but it is love redefined to accommodate suffering as an *a priori* necessity for all creaturely existence.

36. Dembski, *End of Christianity*, 143. "Kairological" is from Greek *kairos*, time as a (crucial) point, by contrast with *chronos*, time as a continuous reality.

37. *Ibid.*, 145, emphasis original.

38. *Ibid.*, 110.

39. *Ibid.*, 146.

40. His explanation, of the book of Job, about "walking up and down" in the world (1:7) is language most often used of God himself – four out of its seven occurrences in the Greek Bible. Only here, in Job, because of Satan's presumption, is the language applied to himself.

41. Compare his insistence at the start of Christ's ministry (Matt 4:1-11).

42. Just like Revelation 12:9, the temptations narratives of Matthew 4 and Mark 1, taken together, show that the devil and Satan are one and the same person.

43. See Lael Caesar, "Where in the World Is Satan the Devil?" *Ministry*, November, 2010, 6-10; and "Religious Faiths and the Problem of Evil: a Biblical Perspective," Foundation for Adventist Education, Symposium IV on the Bible and Adventist Scholarship, <http://fae.adventist.org/essays.htm>.

44. Richard Rice, *Reign of God* (Berrien Springs, MI: Andrews University Press, 1997), 144-148.

45. Kenneth A. Matthews, *Genesis 1-11:26*, New American Commentary (Nashville: Broadman & Holman, 1996), 61. See also Hans Kung, *Justification: The Doctrine of Karl Barth and a Catholic Reflection* (Louisville, KY: Westminster John Knox, 2004), 22.

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46. John F. Haught, *Responses to 101 Questions on God and Evolution* (New York: Paulist Press, 2001), 81.

47. "Human beings, including Jesus, may have evolved over billions of years," *ibid.*, 11.

48. *Ibid.*, 10.

49. Athanasius, "The Incarnation of the Word of God," in Edgar and Oliphint, *Christian Apologetics*, 175. J. Rodman Williams is aware that "the same One who has redeemed us was the channel through whom all things came into being," J. Rodman Williams, *Renewal Theology: God, the World, and Redemption*, vol. 1 (Grand Rapids, MI: Academie, 1988), 103.

50. J. van Genderen and W. H. Velema, *Concise Reformed Dogmatics*, trans. Gerrit Bilkes and M. van der Maas (Phillipsburg, NJ: P&R, 2008), 261, relying on Karl Barth, *Church Dogmatics* (3:1): *The Doctrine of Creation* (Edinburgh: T&T Clark, 1958), 230-31.

51. Athanasius, "The Incarnation," 180.

52. Genesis 1:31 (*tōw me'od*) is a superlative—God's creation couldn't be better.

53. TE claims to understand this core of the divine mystery: "The central idea of Christianity concerns Jesus Christ and the claim that he was the son of God, truly divine and truly human. This extraordinary idea implies the strange notion that the creator of the entire universe chose to enter the human race in the person of an itinerant preacher from Galilee." – Giberson, *Saving Darwin*, 10. But the claim is contradicted by TE's devotion to evolution's mechanistic objectivity. Also, we must be careful to note that God did not enter humanity when Jesus became a Galilean preacher. He came to Mary's womb (Luke 1:35).

54. Or, one might say, a "scandal", given the Greek word for

"stumbling block" – *skandalon* (σκανδαλον).

55. Karl I. Giberson, "Evolution, the Bible, and the Book of Nature: A Conversation With Francis Collins," "Books and Culture," *Christianity Today*, 2009, posted 7/10/2009.

56. Norman C. Nevin, ed., *Should Christians Embrace Evolution?* (Nottingham: IVP, 2009), 210, 214.

57. Overlooking the traces of life in the Precambrian rock.

58. The difficult word *tohu*, occurring in Isaiah 45:18, as also in Genesis 1:2, has no known Hebrew or other cognate to help illuminate its twenty biblical occurrences. Its semantic range, as judged from its varied contexts, ranges from nothingness (Job 26:7 and 15:20), to futility (1 Sam 12:21), to postdestruction desolation (Jer 4:23). In Genesis, at the beginning of Creation week, the phrase *tohu wabohu* stands for the formless void that God will fill during the week's creative action. Here in Isaiah, the text's explicit statement shows it as standing in contrast with "to be inhabited." The evident purpose of the term is to represent emptiness: God created the earth, not for emptiness but for habitation.

59. Collins, *Language of God*, 228.

60. *Ibid.*, 107.

61. J. L. Mackie, "Evil and Omnipotence," in Marilyn McCord Adams and Robert Merrihew Adams, eds., *The Problem of Evil*, Oxford Readings in Philosophy (Oxford University Press, 1990), 25: "The problem of evil . . . is a logical problem, . . . it is not a scientific problem that might be solved by further observations, or a practical problem that might be solved by a decision or an action."

62. Werner Gitt, *Did God Use Evolution?* (Green Forest, AR: Master Books, 2006), 8, 22, 24.

63. *Ibid.*, 90.

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